

The Long-term Impacts of Child Deworming on Mid-life Cognition and Exposome Risk Factors for Alzheimer's Disease and Related Dementias in Kenya¹

Pre-Analysis Plan

AEA RCT Title: Experimental Evidence on Child Health and Long-run Outcomes in Kenya

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Appendix A: KLPS-5 C+ Module survey instrument

Appendix B: Data management statements

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Summary: This document outlines the plan for analyzing data from the fifth round of the Kenya Life Panel Survey (KLPS-5). The KLPS is a longitudinal survey that tracks individuals that were part of a randomized school deworming program in western Kenya from 1998-2001. The KLPS-5 consists of multiple visits to the same KLPS sample with each visit comprising specific modules meant to collect dedicated domains for analysis. A specific aim of KLPS-5 is to establish a mid-life baseline of the health and cognition of respondents in their late thirties and early forties, in order to facilitate future research on healthy aging (including research on Alzheimer’s Disease and Related Dementia (AD/ADRD)) within the KLPS sample. The Cognitive Plus module (C+), the focus of this pre-analysis plan, was launched in January 2023 and collects a battery of cognitive assessments aligned with the Harmonized Cognitive Assessment Protocol (HCAP) as well as measures of the exposome, including key risk factors for AD/ADRD. Future KLPS-5 visits will collect other health and economic data for the adults and will be the focus of future PAPs.

This analysis complements papers and pre-analysis plans already filed to the AEA Trial Registry, covering analyses using the first four rounds of the KLPS (the 20-year impacts of deworming). The main deworming treatment effect analyses pre-specified here use analogous regression specifications to Baird et al. (2017) and Hamory et al. (2021). Additionally, we pre-specify additional analyses related to cognition and exposome risk factors. Data collection is ongoing, and no treatment effects have been estimated with KLPS-5 C+ data.

This plan defines 5 families of outcome variables that are collected in the C+ module: (1) cognitive ability, (2) job characteristics and complexity, (3) stress and discrimination, (4) social connection and support, and (5) air pollution exposure. Domains (2) through (5) capture potential risk factors for AD/ADRD. Additional analyses will be carried out beyond those included in this document; this document is therefore not meant to be comprehensive or to preclude additional analyses.

1. Introduction

This PAP pre-specifies the outcome domains and analyses that will be conducted for the fifth round of the Kenya Life Panel Survey (KLPS) Cognitive Plus (C+) module. The KLPS is a longitudinal (panel) dataset of individuals who were participants in a randomized health intervention (school-based deworming) during childhood. The KLPS contains detailed information on health, cognition, educational, nutritional, demographic, social, and labor market outcomes for over 6,500 Kenyans first surveyed during 1998 (ages 8-15) through 2021 (ages 31-39). The fifth round of KLPS (KLPS-5) consists of multiple visits that comprise different modules. The C+ module we focus on here was launched in early 2023 and aims to (a) establish a mid-life cognitive baseline and (b) measure selected exposome risk factors for Alzheimer’s Disease and Related Dementia (AD/ADRD), for current and future research on aging. In future visits within the KLPS-5 round, we will collect additional outcomes, and the statistical analyses pre-specified here using the C+ module will largely overlap with the analyses using data from these future visits. The remainder of this section will describe the C+ module and provide background on the experimental design and results from analyses of earlier data collection efforts.

1.1. Summary of KLPS-5 C+ Module

One of the world regions about which we have the least knowledge of Alzheimer’s Disease and Related Dementia (AD/ADRD) is Sub-Saharan Africa (SSA). The recent Alzheimer’s Disease International (ADI) report calls the region one of its biggest challenges: they project the number of people living with dementia in SSA will almost double in the next 20 years, yet there is still huge stigma, countries are unprepared for the coming strains on public and private care infrastructure, and knowledge is lacking on dementia prevention and mitigation strategies (Alzheimer’s Disease International et al. 2015). The 2015 World Alzheimer’s Report estimated a 4.6% prevalence of dementia among adults ages 60+ in SSA; this prevalence is similar to the estimated 5.7% in the U.S. The Report further forecasted that prevalence will increase between 2015-2050 by 291% in Africa—yet Eastern and Southern Africa “stand out as persistently lacking in research” (Alzheimer’s Disease International et al.

2015). Indeed, two years later, the 2017 ADI report updated their SSA prevalence estimate by one-third, to 6.4%.

A key aim of the KLPS-5 C+ module is to measure mid-life cognition and to collect additional measures of the exposome to establish a “mid-life baseline” of cognitive measures and AD/ADRD risk factors.

We will derive cognitive measures of a variety of key domains such as memory, visuospatial skills, and executive functioning from an extensive battery of tests via factor analysis. In addition, this mid-life baseline will contain information on key risk factors for AD/ADRD such as social support networks, job characteristics and complexity, and air pollution. We will use this information to analyze the associations between AD/ADRD risk factors and midlife cognition, as well as the determinants of these risk factors using the KLPS panel dataset. A noteworthy element of the proposed statistical analysis is the ability to estimate the causal impact of a child health investment (deworming) on midlife cognition and on a range of AD/ADRD risk factors. This study builds on the work of Miguel and Kremer (2004), Baird et al. (2016), and Hamory et al. (2021) as well as analyses of economic outcomes pre-specified in Baird et al. (2017), to provide experimental evidence on the long-run effects of improved child health on a broad range of risk factors for AD/ADRD in Africa.

This document lays out our current thinking about analytical approaches with KLPS-5 C+ data but we anticipate carrying out additional analyses on the C+ data beyond those included in this plan. We use the C+ data to define outcomes in the following domains: a) cognition, b) job characteristics and complexity, c) stress and discrimination, d) social support connection and support, and e) air pollution. We will be collecting additional data as part of future KLPS-5 visits, including on health and economic outcomes, and these will be covered in future pre-analysis plans.

1.2. Experimental Design and Previous Work

This section briefly describes the experimental design and results from analyses of earlier data collection efforts; for further details, see Miguel and Kremer (2004), Baird et al. (2016), and Hamory et al. (2021). (Much of this section is reproduced from Baird et al (2017).)

Between 1998 and 2001, 75 primary schools containing nearly 30,000 children in a rural district of western Kenya were phased into a deworming treatment program known as the Primary School Deworming Program (PSDP). All children attending treatment schools received drugs twice per year to eliminate intestinal helminths. Schools were phased into the program over time, such that 25 schools were randomly selected to receive treatment starting in 1998, another 25 schools were randomly selected to receive treatment starting in 1999, and the final 25 schools began receiving treatment in 2001.

Previous work analyzed the near-term, 10-year, and 20-year impacts of this program. Miguel and Kremer (2004) find substantial impacts on the school attendance of treated children within 1-2 years of program launch, as well as impacts on children attending schools nearby.² In subsequent work, Baird et al. (2016) exploit the second round of a longitudinal dataset known as the Kenya Life Panel Survey (KLPS-2), which tracked a representative subset of 7,500 children with an effective tracking rate of 82.5%, in order to study the impacts of improved child health 10 years after the launch of the PSDP. The authors find evidence of increased labor supply among men and education among women, with accompanying shifts in labor market specialization, and increases in meals consumed, as well as wage earnings. Hamory et al. (2021) take advantage of two additional rounds of data collection (KLPS-3 and 4) to estimate treatment effects on economic outcomes up to 20 years later. The authors find evidence that individuals who received two to three additional years of childhood deworming experienced a 14% gain in consumption expenditures and 13% increase in hourly earnings. These individuals were also more likely to migrate from rural to urban areas and experience a 9% increase in nonagricultural work hours. Ongoing work continues to analyze additional outcomes collected in KLPS-4.

1.3. Data Examined to Date

Data collection for the KLPS-5 C+ Module began in January 2023, and is ongoing at the time of writing of this PAP. The data management statements (in

² These results were confirmed in Miguel and Kremer (2014), which utilizes updated data and corrects coding errors in the original analysis.

Appendix B) specifies that all KLPS-5 C+ Module data collected prior to the registration of pre-analysis plans would be compiled, organized, and stored by the Busia-based research staff, Eric Ochieng and Brenda Ochieng', such that no one working on this pre-analysis plan would have access to KLPS-5 data merged with deworming treatment status data (or treatment status for other interventions carried out in the KLPS sample). This pre-analysis plan was developed and reviewed only by researchers on the project who have not accessed any merged treatment status data in any way beyond observing participant tracking and survey rates, which are sometimes broken down by treatment status to ensure balanced follow-up rates. Access to portions of the KLPS-5 C+ Module data have been provided to researchers included on this pre-analysis plan in order to undertake analyses to ensure data quality. For instance, preliminary factor analyses of cognitive domains have been performed to assess the validity of the cognitive tests included in the C+ Module. None of the proposed analyses on the cognitive impacts analysis of air pollution or other exposome factors has yet been carried out by team members at the time of writing this PAP.

Full access to the KLPS-5 C+ Module data including merged treatment status variables will only be provided to all research team members after this PAP is filed on the AEA RCT Registry.

1.4 Relation to other pre-analysis plans covering KLPS-5 data

The KLPS-5 activity is a complex data collection effort, with numerous pieces that will feed into multiple articles, and we anticipate filing additional pre-analysis plans that will cover data collected as part of future KLPS-5 visits. These plans will utilize similar specifications and build on a common experimental design. Each of these pre-analysis plans may be a stand-alone paper, or we may combine (or split) plans (or portion of plans) into a single article. For instance, the current plan is for Visit 2 of KLPS-5 to focus on health-related measurement (including biomarkers) and Visit 3 to focus on socioeconomic and living standards outcomes and economic preferences. There will also be a visit to survey children of the main KLPS respondents. Sets of results may be organized in different ways across articles as ex-ante it is difficult to know how the results will relate to one another.

2. Statistical Analysis

There are five main analyses that we currently plan to conduct with the KLPS-5 C+ data; the degree to which it is possible to pre-specify all aspects of these analyses varies. In addition, some of the analyses are more descriptive or exploratory.

Our first analysis involves constructing mid-life cognitive domain measures using confirmatory factor analysis, including engaging in statistical harmonization of these measures with other international studies. The factor loadings generated by this analysis will help form the basis of our cognitive outcomes.

Second, we plan to analyze the associations between AD/ADRD risk factors and midlife cognition, both in terms of levels and changes relative to early-life cognition; we outline the main approaches we plan to use for this analysis, but this observational analysis is by nature more descriptive and associational (rather than causal).

Third, we plan to estimate the correlation between individual cognitive performance in childhood, early adulthood and midlife for identical (or comparable) assessments, with data spanning up to 28 years.

Fourth, we plan to estimate the causal effect of a randomized childhood deworming treatment on AD/ADRD risk factors and mid-life cognitive performance based on the specification used in Baird et al. (2016) and Hamory et al (2021); we view this analysis utilizing experimental variation as the most standard for pre-specification.

Fifth, we plan to estimate the impact of contemporaneous air pollution exposure on current cognitive outcomes. As we note below, some aspects of this analysis will depend on further work, but we outline our current thinking and highlight some aspects that may be more exploratory.

2.1. Deriving Cognitive Measures via Factor Analysis

The first piece of analysis (on which work has already begun) is to carry out confirmatory factor analysis across measures that have been found to be in the same cognitive domain in previous work. These relationships will be of interest in and of themselves, and will form the basis for the primary cognitive outcomes, as we describe in the next section.

We will follow best practices for generating these measures, and for statistical harmonization across other HCAP studies (e.g. Gross et al. 2023, Briceño et al. 2022). In particular, this means that data will be cleaned and characterized; descriptive statistics and displays will be developed at the item level and, for existing cognitive tests at the scale level; and bivariate relationships will be characterized. Extreme values and transformations needed to regularize data will be identified, with careful attention to recognizing systemic reasons for skewness or extreme values. Of key importance in this study is a full interrogation of missing data and the reasons for missingness (e.g., don't know, refused, cannot do, illiterate, innumerate). In order that analyses are guided by theory and hypothesis, we will then conduct confirmatory factor analyses to test fits for models of general cognitive performance, memory, language, executive functioning, visuospatial ability, and orientation. Model fit will be evaluated using objective fit indices (RMSEA, CFI, SRMR), as well as pairwise normalized residuals between items. Adequate fit to prespecified domains will be evidence that such domains can be used to reliably rank participants in this study with respect to cognitive performance and classify cognitive impairment. We will explore differences in the proportion of correct responses and the measurement structure of domains by age, sex, level of education, and literacy using tests of measurement invariance. Once measurement invariance has been sufficiently demonstrated, we will derive general and domain-specific factors as feasible based on tests available from previous rounds.

We will then generate cognitive scores by domain; let the score collected in the KLPS-5 C+ module for individual i on assessment k within cognitive domain d be denoted as $y_{ikd,5}$. In particular, across all assessments k within a particular broad cognitive domain d , i.e., memory, the index generated using confirmatory factor analysis is denoted $y_{id,5}^*$, where the star denotes that the variable is an index. We will similarly create an index of overall cognitive performance by considering measures across all cognitive domains, and this measure is denoted $y_{i,5}^*$. These indices, both the overall cognitive performance index $y_{i,5}^*$ as well as broad domain specific indices, $y_{id,5}^*$, will be the main objects of statistical analysis, as we discuss further in Section 3.

2.2. Association between AD/ADRD Risk Factors and Mid-Life Cognitive Performance

A second analysis of interest will be estimating the associations between the indices of midlife cognitive performance described above (Analysis #2.1) and AD/ADRD risk factors collected in KLPS-5 and past rounds. The KLPS-5 C+ module collects data on exposome factors that are relevant for assessing an individual's AD/ADRD risk, specifically, occupational characteristics and complexity, stress and discrimination, social support, and air pollution. This analysis will be augmented with risk factors collected in past KLPS rounds (such as educational attainment) and as part of future KLPS-5 visits (such as health conditions). It is unknown how strong these associations are in a largely healthy midlife population, especially in a SSA setting where there is limited research on aging-related cognitive decline. Regardless, collecting these risk factors contemporaneously at midlife will provide valuable data for future analyses as respondents age. Similarly, collecting cognitive measures at midlife will provide a baseline against which to assess future cognitive changes.

For analysis 2.2, we will be regressing a cognitive performance measure, e.g., the overall individual cognitive performance index defined above, $y_{i,5}^*$, on a vector of individual risk factors collected throughout the life course (e.g., educational attainment). This analysis is inherently exploratory given the many risk factors that are associated with cognitive decline (Livingston et al., 2020). We will perform a LASSO regression to identify the covariates with robust associations. The risk factors collected during the KLPS-5 data collection (exposome factors such as job complexity, stress and discrimination, social support, and air pollution) are denoted with the vector $R_{i,5}$ while those collected in earlier KLPS rounds or in the PSDP baseline data (e.g., child SES) are denoted $R_{i,0}$. The main regression equation is:

$$y_{i,5}^* = a + (R_{i,5})'b_1 + (R_{i,0})'b_2 + e_i \quad (1)$$

where e_i is an error term. The coefficient estimates b_1 and b_2 will allow us to estimate the association between midlife cognitive performance and contemporaneous and lagged AD/ADRD risk factors, respectively. These analyses will also be carried out separately by sex/gender subgroups. The equation illustrates the approach for general cognitive performance ($y_{i,5}^*$), but analogous analysis will be carried out for each of the cognitive domain factors ($y_{id,5}^*$). Additional analyses will include the vector $R_{i,0}$ alone to understand the overall impact of early life factors on mid-life cognition ($y_{i,5}^*$), some of

which may be operating through midlife measures. Where a comparable earlier cognitive measure is available, we will also estimate a regression model that includes a baseline value $y_{i,0}^*$ as an additional explanatory variable; analysis including a baseline adjustment is likely to lead to more precisely estimated coefficients on other variables, but has the limitations that the earlier measure may only be available for some participants, and it may not be exactly comparable to the KLPS-5 C+ data (i.e., not all measures were collected earlier). This will also alter the interpretation of the resulting estimates. When comparable earlier data is available, we will additionally employ the change from childhood to midlife ($y_{i,5}^* - y_{i,0}^*$) as the outcome (dependent variable).

2.3. Correlation between individual cognitive performance in childhood, early adulthood and midlife

A leading question in AD/ADRD research is the extent to which later-life cognition is influenced by cognition at earlier ages in the life course. One way to evaluate this is by estimating the within-person correlation of scores on repeated measures at different ages using the same cognitive test. This analysis will leverage the longitudinal (panel) dimension of the KLPS dataset, and the fact that closely related tests have been administered to the same individuals in childhood, young adulthood, and via the proposed project, in midlife. For instance, most KLPS sample participants were administered either a cognitive assessment and/or an academic achievement style test in childhood (typically between ages 9-13) and again in young adulthood (typically in the 20's). The KLPS-5 C+ data collection is gathering related or in some cases the same assessment in midlife. It is rare to have measures of similar cognitive tests decades apart for the same individuals, with a well-known exception being the Lothian (UK) Birth Cohort studies (Deary et al. 2004, 2007).

Consider a cognitive or academic test measure k measured both in KLPS-5 (denoted $y_{ik,5}$), while $y_{ik,0}$ is the same score measured in childhood and $y_{ik,3}$ is the measure from KLPS-3 (young adulthood). Where a measure k is available in childhood, we will estimate the pairwise correlation coefficient $Corr(y_{ik,5}, y_{ik,0})$, yielding the correlation across nearly three decades. When the measure is only available in young adulthood, we will estimate the pairwise correlation coefficient $Corr(y_{ik,5}, y_{ik,3})$, yielding

the correlation across roughly 15 years. This analysis will provide evidence on the persistence of cognitive performance across the life course. We will explore patterns across major socio-demographic subgroups, including by gender.

2.4. Deworming Effects on Mid-life Cognition and AD/ADRD Risk Factors

The main econometric approach for the deworming impact analysis is a cross-sectional analysis of the KLPS-5 data, as many of these data have only been collected in round 5. In cases where we collect comparable risk factors in multiple rounds, we may pool observations from KLPS-5 with earlier rounds to estimate average deworming effects across all rounds, following Baird et al. (2017).

As described above, the KLPS sample includes a representative subset of approximately 7,500 individuals who participated in the original PSDP. There were other cross-cutting experiments carried out among a subset of the KLPS sample, and we adjust the analysis when appropriate to account for this aspect of the design. Approximately 1,500 of these individuals additionally took part in a vocational training voucher and cash grant program which launched in early 2009, prior to the start of the KLPS-3 and KLPS-4 data collection rounds, respectively. Approximately three quarters (1,070) of these individuals were randomly selected to receive either vocational training vouchers or cash grants (or both). In order to focus on the impacts of the deworming treatment intervention, and not confuse findings with these other interventions, data for these 1,070 individuals will be dropped from the deworming analysis sample once these other treatments could have influenced outcomes. Specifically, those in the vocational training voucher program will be dropped when using the KLPS-3, KLPS-4, and KLPS-5 data, and those in the voucher program control group but cash grant treatment group will be dropped in KLPS-4 and KLPS-5 (the cash grant program was administered after KLPS-3). Because the voucher and grant winners and non-winners were selected randomly, the analysis will adjust the survey weights for individuals in the non-winner comparison group in order to maintain initial (baseline PSDP) population representativeness. This sample adjustment was not made in Baird et al. (2016), which focused on KLPS-2 data collected prior to the launch of the vocational training voucher and cash grant interventions.

2.5.1 KLPS-5 cross-sectional methodology

We will estimate the long-run effects of deworming on mid-life cognition and AD/ADRD risk factors using KLPS-5 data. The main analysis is based on the cross-sectional methodology in Baird et al. (2016) and Hamory et al. (2021), as we are able to use this for all of our KLPS-5 outcomes.³ The results yield the average impact of deworming on these outcomes.

Following Baird et al. (2016) and Hamory et al. (2021), this cross-sectional approach will estimate the impacts of deworming on outcomes using the following equation:

$$Y_{ij} = \alpha + \lambda_1 T_j + \lambda_2 C_j + \lambda_3 P_j + X'_{\{ij,0\}} \beta + \varepsilon_{ij} \quad (2)$$

where Y_{ij} is the outcome Y for individual i in school j , $T_j \in \{0, 1\}$ is the assigned deworming program treatment status of the individual's primary school (defined as in Baird et al. 2016), $C_j \in [0, 1]$ is an indicator for whether the school was designated as a PSDP “cost sharing” school in 2001⁴, $P_j \in [0, 1]$ is the treatment saturation proportion among neighboring schools within 6 km during the PSDP (explained in more detail in Baird et al. 2016), and ε_{ij} is the error term clustered at the school level.

As in Baird et al. (2016) and Hamory et al. (2021), the covariates $X_{\{ij,0\}}$ include a vector of baseline school characteristics (average test score, school population size, number of primary school students within 6 km, and an indicator for the administrative zone of school), as well as baseline individual characteristics (indicators for gender and grade at the launch of the PSDP), and indicators for the month and wave of KLPS-5 survey. We will additionally include an indicator variable denoting individuals in the vocational training voucher and cash grant control group (who are included in the sample). In the analysis of cognitive outcomes, we will also include enumerator fixed effects if we find statistically significant evidence of interviewer effects.

³ In addition, as this only uses KLPS-5 data, collection of which is ongoing and has not been shared with the authors, this is the most straightforward to pre-specify (see Section 1.4 for more details).

⁴ See Baird et al. (2016) for a description of this cost-sharing experiment.

All regressions will be Ordinary Least Squares unless specified otherwise, and estimates will be weighted to maintain representativeness with the baseline PSDP population, taking into account the sampling for inclusion in the KLPS, the two-stage KLPS tracking methodology, and inclusion in the vocational training voucher and cash grant program (as noted above). We will present results for the full sample for all outcomes, and for several outcomes we will focus primarily on trimmed samples (described in more detail below). Finally, for most domains, the analysis will be conducted on the entire sample, as well as broken out by gender. We note exceptions to this when defining outcomes in Section 3.

The main hypothesis test will be a two-sided t-test on the significance of λ_1 , the coefficient on the treatment indicator T_j , against a null hypothesis of $\lambda_1 = 0$. The secondary hypothesis test will be a F-test on the joint significance of the coefficients on T_j , C_j and P_j (λ_1 , λ_2 , and λ_3 , respectively), against the null hypothesis that all three coefficients are jointly equal to zero.

2.5.2 Heterogeneous effects

As noted above, we estimate effects separately by gender, and will statistically test for differences by gender by interacting treatment status with an indicator for gender. In addition to gender, we will estimate heterogeneous treatment effects in the following dimensions:

- Above and below median age
- Parental educational attainment
- 1996 PSDP school's average test score

Parental educational attainment and 1996 PSDP school average test score can serve as a proxy for socioeconomic status during a respondent's childhood. In addition, we may conduct exploratory analyses on a number of other dimensions of heterogeneity, such as urban status.

2.5.3 Multiple Testing Adjustment

For the main coefficient estimate of interest (λ_1 in equation 2 above for the deworming analysis in section 2.5.1), the analysis will present two sets of p-values. The first is standard “per comparison” p-values. These are appropriate for a researcher with an *a priori* interest in a specific outcome. For instance, researchers interested in the impact of deworming treatment on Memory should focus directly on this p-value.

Second, the analysis will also present additional p-values that account for multiple testing. Since the analysis tests multiple hypotheses within each domain of outcomes, it is appropriate to control for the possibility that some true null hypotheses will be falsely rejected. Within each of the domains of pre-specified outcomes, the analysis will compute the False Discovery Rate (FDR) adjusted q-values (analogue to the standard p-value) that control the expected proportion of rejections that are Type I errors over the primary outcomes within a domain. Specifically, the analysis will follow the approach adopted in Anderson (2008) and Casey *et al.* (2012), and the references cited therein.

As previously noted, it is difficult to know in advance how domains of outcomes will fit together into distinct papers. If we combine multiple domains outlined in this pre-analysis plan into a single paper, we will additionally report a more conservative multiple testing correction, namely the FDR adjusted q-values across all of the primary outcomes of domains included in a single paper.

A number of our outcomes are indices of multiple variables. When we report components of an index, we will also report FDR adjusted q-values across the different components of an index.

Likewise, when testing for heterogeneous effects, we will conduct an analogous multiple testing adjustment among the interaction terms for outcomes within each domain.

2.5.4. Tracking and Attrition

Maintaining low and balanced rates of attrition is important both for the validity of experimental estimates and for sample representativeness. First, we will report effective tracking rates by treatment arm, both overall and by gender. Second, if we do find meaningful and statistically significant differences in survey rates across treatment arms,

we will then estimate average baseline differences in terms of baseline covariates using standard two-sample t-tests between those found and not found during the KLPS-5 C+ Module tracking activity. These covariates include:

- Assignment to deworming treatment (groups 1 and 2) and control (group 3), directly and interacted with gender
- Gender
- Age in January 2023 (the start of Wave 1 C+ Module surveys)
- Baseline standard
- 1996 PSDP school's average test score
- Indicator for whether 1998 primary school is located in Budalangi division
- Population of 1998 primary school
- Total number of treatment participants who studied at primary schools within 6 km of 1998 primary school
- Total primary school students within 6 km of 1998 primary school
- 1998 test scores⁵
- Participation in the vocational training program
- Participation in the cash grant program

Furthermore, if attrition is not balanced, we will investigate the robustness of the primary results by presenting i) estimates reweighted to account for attrition (IPW), ii) upper and lower bounds on impact estimates (Lee, 2009). In particular, for the IPW approach we will estimate and implement attrition propensity weights, first running a probit regression predicting presence in the sample with the covariates noted in this section and their interaction with treatment, and then weight outcomes by the product of the sampling weights and the inverse of this follow-up success probability. When following the Lee (2009) approach, we will present the lower and upper bound estimates trimming the tails of the distribution to generate the same observed attrition rates for both treatment arms. For these reweighting and bounding corrections, we may employ

⁵ This test score was collected in 1998 and was part of the first-year follow-up of the deworming program. No impacts of deworming were detected. This data exists for only a (non-random) subset of parents. For more information on this test score, see Miguel and Kremer (2004).

other newer econometric methods (that have since been developed) if they improve on the approach described here.

2.6 Impacts of Contemporaneous Air Pollution Exposure on Cognitive Performance

We will test if contemporaneous exposure to higher levels of air pollution affect cognitive functioning. The main statistical analysis will be a two-way fixed effects regression of a cognitive performance measure, e.g., the overall individual cognitive performance index defined above, $y_{i,5}^*$, on contemporaneous PM_{2.5} exposure collected from real-time air pollution monitoring devices ($PM_{i,5}$) conditional on a vector of control variables ($X_{i,5}$) collected by the monitoring devices (e.g., current weather) and individual level covariates (discussed below). The main regression equation is:

$$y_{i,5}^* = a + b_1 PM_{i,5} + X_{i,5} 'b_2 + \alpha_g + \alpha_t + e_i \quad (3)$$

where e_i is an error term. The coefficient b_1 estimates the association between midlife cognitive performance and contemporaneous air pollution exposure. Among the rich set of individual covariates collected in KLPS, we will run a LASSO regression to select the control variables with the most explanatory power. The model also includes geographic (α_g) and time (α_t) fixed effects. Geographic fixed effects are defined at the specific county or city where the respondent resides, and could capture a wide range of factors that determine local air pollution and cognitive outcomes. Time fixed effects refer to the specific time period when the survey was conducted, including time-of-day FE's, day-of-the-week FE's, and month FE's. By controlling for these fixed effects and an array of relevant individual characteristics, we aim to isolate the contemporaneous effects of air pollution exposure on cognitive performance.

2.6.1 Using wind direction as an instrumental variable

We will plan to explore the feasibility of using wind direction as an instrumental variable (IV) for air pollution, and in particular, we intend to employ daily wind direction as an IV. Underlying this approach is an assumption that quasi-experimental natural daily variation in wind direction at a respondent's location has no direct effect on cognitive ability except as it acts through air pollution levels (conditional on geographic and time fixed effects). In addition, for this approach to be valid, there needs to be a

strong first stage between wind direction and air pollution levels in the areas in which KLPS respondents are surveyed. We have not yet conducted the analysis to establish whether this holds, and thus we do not know for sure whether this approach will be feasible in practice. We plan to leverage the fifth generation ECMWF reanalysis (ERA5), offering globally consistent wind direction data since 1940 (or updated versions of this data). This data harmonizes global observations into a comprehensive set using data assimilation that is updated daily and offers hourly estimates on a 0.25-degree grid for reanalysis and 0.5 degrees for uncertainty estimates. Pre-calculated monthly mean averages are also available.⁶ We plan to employ an approach building on Deryugina et al. (2019).

3. Main Outcomes

This section defines the primary and secondary outcomes of interest for each of our 5 families of outcomes: (1) cognitive domains, (2) job characteristics and complexity, (3) stress and discrimination, (4) social contacts and social capital, and (5) air pollution. Domains (2) - (5) represent AD/ADRD risk factors collected in KLPS-5 C+. Other risk factors may be collected in future KLPS visits but here we focus on those collected in the C+ module. Tables 1-5 (below) presents these outcome families, the primary and secondary outcome variables in each family, and the respective survey questions from KLPS-5 C+ and past rounds (when available) that make up the outcome variables.

Unless otherwise specified, the primary method of constructing indices for outcome families (2) to (5) will be mean effects following Kling, Liebman and Katz (2007). Within these outcome families, if a primary outcome listed below is missing for more than 20 percent of observations (not including attrition), then we will not report it as a primary outcome. Likewise, if, for an indicator variable, more than 95 percent of responses take a single value, we will not include it as a primary outcome or as an index component.

It is important to note that the grouping of measures into distinct cognitive domains depends on how they are correlated within a particular population, and this

⁶ For instance, see <https://cds.climate.copernicus.eu/cdsapp#!/dataset/reanalysis-era5-single-levels?tab=form>

cannot be known with certainty in advance of data collection and analysis. Thus it remains possible that the groupings and use of particular measures into domains specified below will be modified during the course of factor analysis.

3.1 Outcome Family 1: Cognitive Domains

The KLPS C+ Module contains a comprehensive battery of cognitive tests designed to cover a breadth of domains that together form a clear picture of midlife cognitive health. In this section we provide background on the primary and secondary outcome variables for this family, and summarize the cognitive tests that were used in the C+ module that go into calculating these outcome variables.

Table 1 provides an overview of the primary and secondary outcomes in this outcome family. The primary outcome variables are listed in Column (A) and consist of cognitive scores for the following cognitive domains: (1) Orientation, (2) Memory, (3) Executive Functioning, (4) Language Fluency, and (5) Visuospatial. The scores for each cognitive domain are calculated using methods described in Analysis 2.1. Column (B) shows the tests that were included in the C+ module that go into calculating each cognitive domain score. The component tests in Column (B) will also be used as secondary outcome variables in our analysis. The following subsections provide details on each individual test in each cognitive domain.

3.1.1 Global Cognitive Scores

A key primary outcome is a Global Cognitive Score, which is constructed using a factor score derived from the 5 cognitive domains (described below in 3.1.3) to create one total score, as in the analysis described in Section 2.1. This is the most comprehensive global cognitive measure and will be a main focus of the analysis. Gross et al. (2023) is one example paper that provides more details on generating global cognitive scores.

A goal of the study – and a key motivation for including a cognitive battery that builds on the HCAP – is in order to construct harmonized measures across studies. We also plan to construct a global cognitive score that is harmonized with other studies in

the HCAP, which may follow methods such as Gross et al. (2023) or those in the Gateway to Global Aging, which has generated total cognitive scores by summing “standardized scores” of all component tests in Column (B) that are part of the battery of tests that make up the HCAP. Future analysis will help inform the most appropriate methods for generating this score.

3.1.2 Swahili Mental State Exam Summary Score (SMSE)

The Swahili Mental State Exam (SMSE) comprises many component tests that are adapted for cultural context; see Table 1 for the full list. The SMSE summary score is the sum of the component scores and will allow for some cross-study comparisons, for instance, with the LASI-DAD study. The individual components are described below.

3.1.3 Orientation

In KLPS-5 C+ we include questions that assess one’s orientation to place and time. These questions are adapted to the Kenyan context and include assessments of one’s knowledge of their physical location (county, city/town/village, local area name), knowledge of the current time (year, season, month, date, week), and the current president. These questions are coded as either correct or incorrect and indices are calculated as the sum across the orientation-specific variables. The orientation domain score is a factor analysis of the Time Orientation score, Place Orientation score, and the Name the President score.

3.1.4 Memory (Immediate, Delayed/episodic, and Recognition)

We include tests of memory in three categories: immediate, delayed/episodic, and recognition memory that are adapted to the local Kenyan context. The memory tests include: (a) 3 word recall, (b) 10 word recall, (c) word recognition, (d) two story recall tests, (e) story recognition, (f) constructional praxis. The memory domain score is a factor analysis of scores from each of the individual memory tests.

- (a) **3 word recall (Immediate and Delayed):** The respondent is presented with a list of 3 words and is asked to recall the words immediately after being read the list. The respondent has up to 3 chances to get all 3 words correct. The score is calculated as the number of trials until all three words are recalled. The respondent is then asked to recall the same 3 words later in the assessment. This is scored as the number of words they recall.
- (b) **10 word recall (Immediate and Delayed):** In the 10 word recall test, the respondent hears 10 words read out loud to them and is asked to recall as many of the 10 words as they can immediately after hearing them. This is repeated in a second and third round with a different order in each round. The final score is the total number of words recalled across all three rounds. The respondent is then asked to recall the same 10 words later in the assessment. This is scored as the number of words they recall.
- (c) **Word Recognition:** In the word recognition test the respondent was read a set of 20 words and were asked to indicate whether they were one of the 10 words that were read to them earlier. The score is the sum of correct answers.
- (d) **Story Recalls (Immediate and Delayed):** In each of the two story recall tests the respondent is read a story and is asked to recall the key details of the story immediately after hearing the story. The scoring is based on whether the respondent recalled specific details and the total score for each is the sum of correct story points recalled. The respondent is then asked to recall the same stories later in the assessment. This is scored as the number of key details they recall.
- (e) **Story Recognition:** In the story recognition test the respondent was read a list of story details and were asked to indicate whether those details were part of the story that was read to them. The story recognition was only for the second story. The score is the sum of correct answers.
- (f) **Constructional Praxis (Delayed):** The constructional praxis (delayed) test asked the respondent to recall shapes they drew from an earlier test (constructional praxis immediate, see section 3.1.5), and redraw them from

memory on a blank page. The score is the sum of all correct shapes they recalled.

3.1.5 Executive Functioning

We include numerous tests generally considered to measure executive function, which are listed below. The executive functioning domain score is a factor analysis of scores from each of the individual component tests.

- (a) The **Go/No-Go test** was a series of stimuli that was presented continuously (taps on a table) with intermittent interruptions in which the person responded with binary decisions that were either correct or incorrect (Gomez, Ratcliff, and Perea, 2007). One of the outcomes required the respondent to make a motor response (go) whereas the other required participants to withhold the response (no go). This was conducted in two rounds where the rules were switched in round two. The score is the total number of correct responses.
- (b) **Clock drawing** test asked the respondent to draw a clock with 3 distinct features: 1) closed circle, 2) numbers arranged around the inside of the circle, 3) has two hands pointed at 10 minutes after 11. The score is the sum of all correct scoring points.
- (c) **Raven's Standard Progressive Matrices** measures fluid intelligence and abstract reasoning. We used the same set of 17 questions that are used in other HCAP studies. The score is the sum of all correct answers.
- (d) **Forwards and Backwards Digit Spans** measures working memory capacity. The enumerator says a string of numbers and the respondent is asked to repeat those same numbers in the same order. The score is correct if they repeat all numbers in the same order. We use the same digit span test used in the LASI-DAD study.
- (e) **Serial-7s** is a test where the respondent is asked to subtract 7 from 100 and continues subtracting 7 from the previous number until the enumerator says to stop. The test is a measure of working memory.

- (f) **Symbol Cancellation Test** measures selective attention and visuospatial functioning. This is a timed test where the respondent is shown a shape (star) and a sheet of paper with multiple different shapes, including the one shown. The respondent has 60 seconds to circle all the stars on the sheet of paper. The score is the total number of stars that were circled. We also measure the number of incorrect shapes circled (i.e. shapes that were not stars).
- (g) **Backwards Day Naming** is a test of attention and concentration. The respondent is asked to say the days of the week backwards and the score is the sum of indicator variables for each consecutive correct answer.
- (h) **Hand Motion Sequence** test is based on the LASI-DAD battery, and asks the respondent to imitate 3 sets of hand gestures. The respondent is scored on whether they can correctly imitate the gesture 5 times on their own, after a demonstration round. If they correctly repeat all gestures 5 times they are awarded 1 point. If they can imitate the gesture 1-4 times they receive 0.5 points. If they cannot repeat the gesture at all, they receive no points. The score is the sum of points for all 3 gestures.
- (i) **Trail Making Test** involves visual scanning and working memory. The TMT has two parts; the TMT-A (rote memory) and TMT-B (executive functioning). The KLPS TMT used in KLPS is adapted from the tablet version used in the Health and Aging in Africa: A Longitudinal Study of an INDEPTH Community in South Africa (HAALSI), and instructions have been adapted from LASI-DAD. Where the KLPS departs from HAALSI and LASI-DAD is by using laminated paper and dry-erase marker administration⁷, instead of tablet administration. The fundamental instructions, placement and order of the shapes remain the same. The test is divided into three parts: a) connect circles from smallest to largest with square distractors, b) connect squares from largest to smallest with circle distractors, and c) connect alternating shapes and sizes starting from the largest square to the smallest circle followed by the next largest square to the next smallest circle, and so on. Each part has one “Demonstration Round”, where the

⁷ The decision to do pen and paper is because of concerns of small tablet screen size and possible difficulties using their finger or stylus pen.

respondent completes the exercise after the enumerator demonstrates how to do the task. This is followed by two "Practice Rounds" where the FR completes the exercise without any demonstration, allowing for one correction to happen before moving on. Finally the "Test Round" has no demonstration and no corrections. The Test Round is timed using a stop watch. We construct multiple scores from the TMT test. The first is the time it takes to complete each type of trail (circles, squares, alternating). The second is an indicator variable for whether they connected the correct shapes in the correct order.

- (j) The **Lost Child Test** involves asking the respondent what they would do if they found a lost child who was looking for their parents. The test was scored correctly if they responded with: take child to the police station, take child to local leaders, take child to administrative officers, or some other appropriate response.
- (k) The **Similarities and Differences** test gives the respondent two similar and two different objects. In the first set of questions the objects are similar and the respondent is scored based on an indicator of whether they say how the objects are similar. In the second set of questions the objects are clearly different and the respondent is scored based on if they say how they are different (indicator variable). The score is the sum of all correct responses.
- (l) The **Making Change** test gives the respondent a scenario where they must make change for a 1000 Ksh note with 200 Ksh notes. They are scored based on whether they provide the correct answer (indicator variable).
- (m) The **Token Test** presents the respondent with a board of symbols and are asked to follow instructions to point to certain symbols based on their shape and color. They are scored based on whether they point to the correct symbols.

3.1.6 Language Fluency

We included tests that measure language fluency, which include: a) Object Naming tests, b) questions from the Community Screening Interview for Dementia (CSID), c) Animal Naming, d) Repeat a Phrase, e) 3-stage task, f) Follow instructions, and g) Write a sentence. The language fluency domain score is a factor analysis of scores from each of the individual component tests.

- (a) The **Object Naming Tests** asked the respondent to say the name of an object that the enumerator would point to. In our battery we had the enumerator point to a pencil and the respondent was scored on whether they said “pencil”. Similarly, the enumerator points to a watch and the respondent was scored on whether they said “watch”. In another Object Naming tasks, the respondent was given descriptions of objects and was asked to identify the name of those objects. In our battery we described a watermelon and scissors and scored it correctly if they named those respective objects. The score is the sum of correct answers.
- (b) The **CSID questions** from a widely used dementia screening tool that is designed for cross-cultural studies. The respondent is asked to perform various object identification and instruction exercises (Hall et al., 2000), is scored based on the total number of correct answers.
- (c) The **Animal Naming** test is a measure of verbal fluency. The respondent is asked to say the names of as many animals as they can think of in 60 seconds. The score is calculated as the total number of animals that are recalled, excluding repetitions and incorrect animals (e.g. fictional characters).
- (d) The **Repeat a Phrase** test involves the enumerator to say a phrase and asks the respondent to repeat that phrase back. The test is scored as correct if they can recall and repeat the phrase to the enumerator.
- (e) The **3 stage task** involves the respondent to perform 3 actions that are said to them. In our case the task is to take a piece of paper that the enumerator holds out to them, fold it, and place it on their lap. The test is scored as the total of indicator variables for correctly performing each step.
- (f) The **Follow Instructions** test involves the respondent to copy an action that the enumerator performs. In our case the enumerator closes their eyes and the respondent must do the same. The test is scored correctly if the respondent closes their eyes.
- (g) The **Write a Sentence** test involves the respondent to write a sentence on a piece of paper if they are literate, or to say a sentence about their house if they are illiterate. The score is an indicator for writing or saying the sentence correctly.

3.1.7 Visuospatial

We included tests for visuospatial skills, which include a) Pentagon Drawing, and b) Constructional Praxis (Immediate). The visuospatial domain score is a factor analysis of scores from each of the individual component tests.

- (a) The **Pentagon Drawing** test involves the respondent to copy a drawing of overlapping pentagons. They have one minute to draw the overlapping shape. They are scored on a set of characteristics of the final drawing after one minute has elapsed. They are awarded one point if the figure has two five-sided figures that intersect to form a four-sided figure. They are awarded another point if all angles in the five-sided figure are preserved.
- (b) The **Constructional Praxis (Immediate)** test involves the respondent to copy drawings on a piece of paper. The drawings are: overlapping circles, overlapping rectangles, a triangle, and a cube. For each drawing the respondent is scored based on a set of characteristics of the final drawing. The score is the total for each drawing.

3.2 Outcome Family 2: Job Characteristics and Complexity

Some existing research – primarily using data from high income countries (HIC's) – has established linkages between occupation and AD/ADRD risk. Job complexity may serve to build cognitive reserve (Fisher et al, 2017), and the “use-it-or-lose-it” hypothesis (Hultsch et al., 1999; Salthouse et al., 2006) suggests those who are consistently mentally active (including at work) better preserve their cognitive function as they age. Individuals in more cognitively complex jobs perform better on measures of cognitive functioning before versus after retirement compared to those in less complex jobs (Fisher et al., 2014). Workers who are simultaneously affected by high psycho-social job demands and low job control are more likely to develop stress-related health problems, (Karasek, 1979) and job strain can lead to various mental and physical illnesses that contribute to greater AD/ADRD risk.

In KLPS-5 C+ we include measures of job characteristics and complexity to construct two sub-families of outcomes within this domain. In outcome family 2A we

construct primary outcomes of job strain from a subset of questions from the Karasek Job Content Questionnaire. In outcome 2B we construct primary and secondary outcomes from the Skills Toward Employability and Productivity (STEP) Survey.

3.2.1 Job Strain

Job strain measures typically assess negative working conditions, challenging demands, and a lack of social support and decision-making authority on the job. Karasek's demand-control model of work-based strain identifies high demands in a context of low control or decisionmaking latitude as a potent combination for poor health (e.g., Karasek et al., 1981, 1988). Subsequent theorists, as well as Karasek and colleagues, additionally emphasized the negative impact of low workplace social support or isolation. Thus, most measures include assessments of demands, perceived control and decision-making authority, and perceived support from co-workers and/or a supervisor.

Job strain is assessed with 15-items taken from the widely used Karasek Job Content Questionnaire (Karasek et al., 1998). Participants are asked to rate their degree of agreement (1-strongly disagree to 4-strongly agree; 5-not applicable) with items assessing job demands (e.g., time pressure, amount of work, little security) and a sense of control or decision-making capacity. As the primary outcome of job strain, a summary score of 6 different job stress questions will be calculated by taking the mean of items 1, 2, 4, 6, 7, and 9. These items ask how much the respondents agrees that: (1) they are satisfied with their job, (2) their job is physically demanding, (4) their salary is adequate, (6) their job security is poor, (7) their job is under constant time pressure due to a heavy workload and (9) they have the opportunity to develop new skill. This summary score is harmonizable with the summary scores created for other HRS sister studies such as SHARE, ELSA, and JSTAR. A detailed description of the construction of the score can be found in Table 2A. The additional questions will provide further information and detail on different aspects of job strain, but will not be part of the summary score.

3.2.2 Job Complexity

We study the respondent's self-reported job complexity building on the World Bank's Skills Toward Employment and Productivity (STEP) surveys. STEP surveys measure skills that workers use in their jobs, and are representative of urban areas in 10 LMICs including Kenya. However, the only publicly available household STEP survey in Kenya was conducted in 2013 and excludes rural workers. The occupation-level measures collected in the STEP surveys are comparable to US-measures (e.g., O*NET), and provide a comprehensive mapping of domains important to job complexity and cognitive functioning. The primary outcome capturing job complexity is a mean effects index of Non-Manual Job Complexity composed of the first three sub-indices listed here below, namely Non-Routine Analytical Index, Non-routine Interpersonal Index, and Routine Cognitive Index. A secondary outcome is a mean effects index of Manual Job Complexity, composed of the fourth and fifth sub-indices listed below, namely, Routine Manual Index and Non-Routine Manual Index. Other secondary outcomes will include each of the five sub-indices, as well as the individual questions that make up these sub-indices.

1. **Non-Routine Analytical Index:** degree of analytic reasoning skills used at work. This is measured as a sum of standardized scores on (a) length of the longest document ever read, (b) number of math tasks performed at work, (c) length of the longest document ever read, and (d) frequency of undertaking tasks that require at least 30 minutes of thinking.
2. **Non-Routine Interpersonal Index:** degree of interactive, communication, and managerial skills used at work. This is measured as a sum of standardized scores on (a) frequency spending time cooperating or collaborating with co-workers, (b) indicator for supervising co-workers being a normal part of work, (c) amount of involvement in interacting with customer/client for at least 10-15 minutes, and (d) indicator for making formal presentations to clients or colleagues as a part of work.
3. **Routine Cognitive Index:** degree of adaptability to work requiring limits, tolerances, or standards. This is measured as a sum of standardized scores on (a) frequency of learning new things at work, (b) amount of autonomy at work, and (c) amount of repetitive tasks at work.

4. **Routine Manual Index:** degree of repetitive physical movements. This is measured as a sum of standardized scores on (a) indicator for operating heavy machinery, and (b) an indicator for the job being physically demanding.
5. **Non-Routine Manual Index:** degree of physical movements requiring adaptability and dexterity. This is measured as a sum of standardized scores on (a) driving as a part of work, and (b) repairing or maintaining electronic equipment at work.

We follow the same approaches used in Dicarlo et al., (2016) when constructing these skills-specific indices. A detailed description of the construction of the indices and respective components can be found in Table 2B.

3.3 Outcome Family 3: Stress and Discrimination

One strand of research has focused on the effects of stress and discrimination factors (e.g., perceived stress, experienced discrimination) on cognition and AD/ADRD. Individuals who have experienced higher levels of discrimination tested lower on multiple cognitive measures and those with higher perceived stress levels experienced faster rates of cognitive decline (Coogan et al., 2020; Barnes et al., 2012). As with job complexity, most research in this vein has focused on HICs; yet the nature of social interactions, social support (including through public policy), perceived stress and discrimination are likely to vary widely within SSA, and these issues will be increasingly important as older populations grow rapidly in the coming decades.

The stress and discrimination outcomes consist of 3 different primary outcome categories: (i) Neighborhood disorder and social cohesion, (ii) ongoing stress, and (iii) discrimination. Details on how the primary and secondary outcomes are constructed can be found in Table 3.

3.3.1 Neighborhood disorder/social cohesion

Living in unsafe and chaotic environments that lack social cohesion is one of the self reported stress measures. Studies have been found that the physical and social characteristics of the neighborhood in which individuals reside is linked to overall

individual health. Two subscale indices are constructed including neighborhood physical disorder summary score and neighborhood social cohesion summary score. Neighborhood physical disorder summary score is calculated by taking the mean of perceived level of four item disorders (vandalism, crime, rubbish and deterioration). These measures are reverse-coded. Neighborhood social cohesion/trust summary score is constructed taking the mean of perceived level of another four items of disorders (belonging, trust, friendliness and support).

3.3.2 Ongoing Stress

Ongoing problems that are threatening, burdensome, or negative can be potent stressors for individuals. If these problems last for more than 12 months, they can lead to longer-term negative health effects. In KLPS we ask the respondent if they have experienced a list of situations for more than a year, and indicate how upsetting those situations have been. These situations include: (1) financial strain, (2) housing problems, (3) relationship problems, (4) problems with alcohol or drug use in a family member, (5) difficulties at work, and (6) difficulty helping at least one sick, limited, or frail family member or friend on a regular basis. Responses are coded from 1-4 and the summary score of the index is calculated as the mean across all situations.

3.3.3 *Everyday discrimination*

The Everyday discrimination domain includes measures of the frequency of discrimination experienced in day-to-day life. This type of discrimination is more subtle than major discriminatory life events and is linked with poorer mental and physical well-being. These measures include six items: respondents being treated with (1) less courtesy, (2) less respect, (3) receiving poorer services at restaurants or stores, being perceived as (4) not smart and (5) scary by others, and (6) being threatened and harassed by others. The frequency of everyday discrimination experiences is measured as the average of frequency ratings (1-almost every day to 6-never.) Ratings are first reversed before averaging so that higher scores indicate greater frequency of occurrence. Individuals are also asked to indicate all of the reasons (e.g., sex, race,

religion, sexual orientation) why they believed they were a target of discrimination if it occurred.

3.4 Outcome Family 4: Social Contacts and Social Capital

Social isolation and decreased social engagement have been widely linked to cognitive decline and identified as important and potentially-modifiable risk factors for developing dementia (Kuiper et al., 2016; Evans et al., 2019; Livingston et al., 2020; Sommerland et al., 2019). Research suggests that high-quality social connections or socially engaged life-styles may increase cognitive reserve, via more efficient use of brain networks (Stern, 2012) or increase of synaptic density (Fratiglioni et al., 2004, Scarmeas et al., 2003), thus protecting against later-life cognitive decline (Atti et al., 2010). One's social network may help buffer against adverse effects of stress on AD/ADRD and may also function as a source of information on health resources, promoting healthy behaviors (Cohen, 2004, Rizzuto et al., 2014).

The social contacts and social capital outcomes consist of 4 different primary outcome categories: (i) perceived and aspiring social status, (ii) relationship quality and social support, (iii) loneliness, and (iv) Lubben's social networks. Details on how the primary and secondary outcomes are constructed can be found in Table 4.

3.4.1 Macarthur Ladder Scale of Subjective Social Status

The Macarthur Ladder Scale of Subjective Social Status is a single-item measure that assesses a person's perceived social rank relative to others in their group (Adler et al., 2000). Respondents are shown a picture of a ladder with numbers next to each rung of the ladder. They read the following prompt: "Think of a ladder as representing where people stand in their villages. At the top of the ladder are the people who have the highest standing in their village. At the bottom are the people who have the lowest standing in their village". They are then asked where they would place themselves on the ladder. They are also asked where they aspire to be placed on the ladder. The perceived social status measure is the primary outcome, and the aspiring social status measure is a secondary outcome.

3.4.2 Relationship quality and social support

Social relations characterized by conflict or low support are hypothesized to be potent sources of stress that are linked to our health, well-being, and longevity (Holt-Lunstad, Smith, & Layton, 2010; House, Landis, & Umberson, 1988; Seeman, 2000; Uchino, 2006). Commonly assessed characteristics include the degree to which social relationship targets can be relied upon, are sources of emotional support, and understand the respondent, as well as the degree to which they make too many demands, criticize, irritate, or let the respondent down when he or she is counting on them. Subcategories to assess such qualitative characteristics of relationships are respondent's relationship qualities with spouses, children, other immediate family members, and friends. Supportive and conflictual qualities of relationships for each type of relationship are assessed (in separate items) by asking respondents to rate how characteristic (1=a lot, 2=some, 3=a little, 4=not at all) each of 6 statements are of each relationship type: (a) how much respondents feels being understood, (b) can rely on their relationships, (c) open up to them, (d) how much respondents feeling criticized, (e) how much respondents feel their relationships lets them down and (f) gets on their nerves. Each score is first reverse coded so that higher values reflect worse social support. We then calculate the mean of these 6 items for each category of social support. We will also include a standardized score that is mean zero and standard deviation of 1.

We also adapted the Lubben Social Network Scale (LSNS) to design the social isolation in adults by measuring perceived social support received by family and friends. LSNS correlates with mortality, all case hospitalization, health behaviors, depressive symptoms, and overall physical health. In our measure, we used the commonly used 6 items to construct LSNS-6 social isolation index by calculating the sum of these six items. Subscales indices of family and friends are also constructed by taking the sum of these items in a given category by assessing the type, size, closeness and frequency of contacts in a respondents current social network. The concept of lack of redundancy in social ties as the key criterion for determining a cut point for identifying individuals at risk for social isolation. This approach is supported by studies demonstrating that a lack

of redundancy of social ties is associated with lower levels of social support (Fuhrer & Stansfeld, 2002). At risk for social isolation is identified when LSNS-6 index is less than 12. Marginal subscale ties are identified when LSNS-6 index is less than 6 in each family and friend category. The continuous LSNS-6 score is the primary outcome. A secondary outcome is an indicator for the index taking on a score of less than 12.

3.4.2 Loneliness

Perceived loneliness is posited to activate stress regulatory systems in the body which may underlie links between loneliness and health. Many studies agree that greater feelings of loneliness are associated with poorer health. The primary outcome is four items (to be comparable across most studies), namely, how often the respondent feels (a) lack of companionship, (b) left out, (c) isolated from others and (d) in tune with the people around them. The last item is reverse coded so that higher scales indicate more loneliness. The secondary outcome includes all eleven (11) items (with reverse coding when appropriate such that higher scales indicate more loneliness). This summary score is adapted from HRS loneliness assessment, which is a subset of items from the UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980).

3.5 Outcome Family 5: Air Pollution

Exposure to air pollution throughout the life cycle is increasingly identified as an important risk factor for AD/ADRD, but remains severely understudied in SSA, in part due to data limitations. Clinical research suggests that airborne particulate pollutants may lead to cognitive decline and dementia through multiple physiological channels, including cerebrovascular and cardiovascular disease, A β deposition, and amyloid precursor protein processing (Livingston, 2020). Several studies have documented associations between air pollution and AD/ADRD, with most finding strong positive associations between fine particulate matter (PM_{2.5}) and AD/ADRD (Silva et al., 2004; Disease Control Priorities Project, 2008; Kirwan et al., 2010; Wammes et al., 2016), as well as some positive associations with NO_x, NO₂, O₃, and PM₁₀ (Peters et al., 2019; Fu and Yung, 2020; Culqui et al., 2017). Methodologies of such studies typically

examine health records of incident dementia cases on an older population of individuals (65+), with few collecting and controlling for individual-level covariates beyond gender, age, and socioeconomic status at the time of diagnosis (Peters et al., 2019). Additionally, while most studies use historical data on air pollution concentrations from the individual's residential area, in practice pollutants stem from a number of sources, including outdoor sources (e.g., industrial zones, traffic), occupational exposures, and indoor exposures (e.g., cooking fuel). These exposures may generate important health disparities across socioeconomic and demographic groups.

3.5.1 Contemporaneous air pollution exposure

In the investigation of contemporaneous air pollution exposure, we will mainly focus on analyzing the data obtained from real-time air pollution monitoring. The main measure of air pollution concentrations (specifically, PM) will be collected at the time and location of KLPS-5 C+ module field interviews using portable PM sensors (namely, the Atmotube) , which are typically conducted at or near the respondent's home or place of work (although in some cases interviews are conducted at IPA offices). We focus on PM_{2.5} as fine particulate matter has been found to have some of the most consequential associations with AD/ADRD (Peters et al., 2019; Fu et al., 2020). We will construct variables of the average and maximum PM 2.5 reading over 15-minute intervals over the course of the survey using the Atmotube readings. As supplementary data, outdoor continuous monitoring systems (capturing PM₁, PM_{2.5}, PM₁₀, temperature, and humidity) were installed and operated at two locations (Busia, Nairobi) where, taken together, the majority of KLPS respondents reside.

3.5.2 Cumulative air pollution exposure

An advantage of focusing on contemporaneous air pollution exposure is the possibility of directly measuring it. However, it may or may not strongly correlate with individuals' air pollution exposure throughout the life course, which may be important in determining AD/ADRD risk. Here we briefly outline the team's current thinking regarding

how to construct measures of cumulative lifetime air pollution exposure; this work has not yet been carried out.

We plan to combine longitudinal migration history data from KLPS data and satellite air pollution data to construct cumulative air pollution exposures, based on respondents' residential location. Migration histories include each location (village/neighborhood) where the respondent has lived for over four months since primary school. We plan to use air pollution data from the Atmospheric Composition Analysis Group at Washington University in St. Louis, which provide calibrated, biased-corrected annual surface PM_{2.5} concentrations from 1998 (when KLPS respondents were in primary school) to 2019 using satellite data and simulation estimates (including aerosol optical depth) (van Donkelaar, 2021), at a high spatial resolution (down to 0.01° × 0.01°), and have been used in a variety of studies measuring the impact of air pollution in Africa (Heft-Neal et al., 2018; Golin, D., 2017).

Specifically, we plan to combine the migration history data with remote sensing PM_{2.5} levels to establish the mean cumulative lifetime exposure to PM_{2.5} by computing the weighted averages of satellite-derived air pollution levels at respondent's residence. This calculation will factor in the residential duration at each location.

We may refine our analytical approach as we learn more about these data, and as there are further advances in measurement from this field.

3.5.3 Other air pollution exposure metrics

In this section, we describe an exploratory approach to measuring mid-life and lifetime air pollution exposure from KLPS survey data. We collected an extensive set of characteristics about household and neighborhood living conditions and activities as that may generate differential exposure to air pollution. Survey questions include a variety of self-reported exposure measures, including: (i) household air pollution (devices and fuel used for cooking, heating, and lighting; housing materials; kitchen location and access to ventilation/air purification), (ii) job-related and transport-related exposures (industry of employment; work physical demands including outdoor work; mode of transportation and commute route; vehicle ownership). We will explore the feasibility of applying models and indices from environmental health science to this

KLPS survey data to construct individual mid-life and lifetime air pollution exposure metrics. This exercise is inherently exploratory. Refer to Table 5C for the relevant measures from the KLPS-5 C+ survey that will be inputs into the mid-life air pollution exposure indices.

3.6 Exploratory Analyses

Additionally, the results of analyses included in this plan may serve as the basis for additional exploration. For instance, we may follow the approach used in Walker et al (2023) to study deworming treatment effects operating through various channels (e.g., schooling attainment). If we find effects on pre-specified outcomes within a particular domain, we may further explore related outcomes to make use of the rich survey data collected as part of the KLPS activity. This document is therefore not meant to be comprehensive or to preclude additional analyses.

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Outcome Family 1: Cognition

A. Primary Outcomes	B. Components (Secondary Outcomes)	C. KLPS-5 C+ Module Q#	D. Variable Construction Notes
Global Cognitive Score	See below.		The global cognitive score will be assessed using 2 methods. The first is a factor score derived from the Orientation, Memory, Executive Functioning, Language Fluency, and Visuospatial factors. Factor analytic methods use all items from all tests in the battery to generate a single score of global cognitive function. See Gross et al (2023) for details. We also plan to construct a global cognitive score that is harmonized with other studies in the HCAP, which may follow methods such as Gross et al. (2023) or those in the Gateway to Global Aging, which has generated total cognitive scores by summing "standardized scores" of all component tests in Column (B) that are part of the battery of tests that make up the HCAP.
SMSE Total Score	See below.	6.1.1, 6.1.2, 6.1.3, 6.1.4, 6.1.5, 6.1.6, 6.1.7, 6.1.8, 6.1.8 a, 6.1.9a OR 6.1.6, 6.1.7, 6.1.8, 6.1.8b, 6.1.9b, 6.1.10, 6.1.13, 6.1.11a, 6.1.11b, 6.1.11c, 6.1.11d, 6.1.11e, 6.1.14, 6.1.15, 6.1.12a, 6.1.12b, 6.1.12c, 6.1.12d, 6.1.12e, 6.1.12f, 6.1.16, 6.1.19b, 6.1.18a, 6.1.20a, 6.1.21a, 6.1.21b	The SMSE Total Score is the sum of all components in the Swahili Mental State Exam. This is the sum of: Time Orientation, Place Orientation, 3 word recall immediate, 3 word recall delayed, Serial 7s, Backwards day naming, Repeat a phrase, 3-stage task, Object naming, Follow instructions, Write/Say a sentence, Draw pentagons. These components and how to construct them are described in the below sections. The range of the score is 0-30.
Orientation Factor Score	Time Orientation	6.1.1, 6.1.2, 6.1.3, 6.1.4, 6.1.5	Sum of variables 6.1.1-6.1.5 (0-5)
	Place Orientation	6.1.6, 6.1.7, 6.1.8, 6.1.8a, 6.1.9a OR 6.1.6, 6.1.7, 6.1.8, 6.1.8b, 6.1.9b	Sum of variables 6.1.6-6.1.9 (0-4)
	Name the President	6.4.8	Indicator for correct answer (0, 1)
Memory Factor Score	3-word Recall (Immediate)	6.1.10	Number of trials until all three words are recalled (0-3)
	10-Word Recall (Immediate)	6.2.1	Number of total words recalled across 3 rounds (0-30)
	Story Recall 1 (Immediate)	6.15.1	Sum of variables 6.15.1-6.15.10 (0-20)
	Story Recall 2 (Immediate)	6.16.1	Sum of variables 6.16.1-6.16.25 (0-50)
	3-word Recall (Delayed)	6.1.13	Number of total words recalled from 3-Word List (0-3)
	Story Recall 1 (Delayed)	6.23.1	Sum of variables 6.23.1-6.23.10 (0-20)
	Story Recall 2 (Delayed)	6.24.1	Sum of variables 6.24.1-6.24.25 (0-50)
	Constructional Praxis (Delayed)	6.26.1, 6.26.2, 6.26.3, 6.26.4	Sum of variables 6.25.1-6.26.4 (0-11)
	10-Word Recall (Delayed)	6.13.1	Number of total words recalled from 10-Word List (0-10)
	Word Recognition	6.14.1	Sum of variables 6.14.1-6.14.20 (0-20)
Story Recognition	6.25.1	Sum of variables 6.25.1-6.25.15 (0-15)	
	Go-no-go	6.19.1, 6.19.2	Sum of variables 6.19.1a-6.19.1j (0-10). Sum of variables 6.19.2 a-6.19.2j (0-10)
	Clock Drawing	6.12.1, 6.12.2, 6.12.3, 6.12.4, 6.12.5, 6.12.6	Sum of variables 6.12.3-6.12.6 (0-4)

Executive Functioning Factor Score	Raven's Matrices Test	6.8.1a, 6.8.2a, 6.8.4a, 6.8.5a, 6.8.6a, 6.8.7a, 6.8.8a, 6.8.11a, 6.8.12a, 6.8.1b, 6.8.2b, 6.8.3b, 6.8.4b, 6.8.5b, 6.8.6b, 6.8.8b, 6.8.10b	Sum of variables 6.8.2a-6.8.12a and 6.8.1b-6.8.10b (0-17)
	Forwards Digit Span	6.9.1	Indicator for correct answer (0, 1)
	Backwards Digit Span	6.9.2	Indicator for correct answer (0, 1)
	Serial 7s	6.1.11a, 6.1.11b, 6.1.11c, 6.1.11d, 6.1.11e	Sum of indicator variables for correct answers from 6.1.11a to 6.1.11e (0-5)
	Symbol Cancellation	6.5.1, 6.5.2, 6.5.3	Difference between the number of correct, 6.5.2, and incorrect cancellations, 6.5.3
	Backwards Day Naming	6.1.12a, 6.1.12b, 6.1.12c, 6.1.12d, 6.1.12e, 6.1.12f	Sum of indicator variables for correct answers from 6.1.12a to 6.1.12f (0-5)
	Trail Making Test	6.18.1, 6.18.2, 6.18.3, 6.18.4, 6.18.5, 6.18.6, 6.18.7, 6.18.8, 6.18.9, 6.18.10, 6.18.11, 6.18.12	We construct multiple scores from the TMT test. The first is the time it takes to complete each type of trail (circles, squares, alternating). The second is an indicator variable for whether they connected the correct shapes in the correct order.
	Hand Sequence	6.20.a, 6.20.b, 6.20.c	Recode scores for each sequence such that 0=Incorrect, 1=Partially Correct (1-4), and 2=Correct (all 5). Summary score for this test is calculated as the sum of scores for the three hand sequences (0-6).
	Found a Lost Child	6.21.1	Indicator for correct answer (0, 1)
	Similarities and Differences	6.10.1, 6.10.2, 6.10.3, 6.10.4	Indicator for correct answer (0,1)
	Making Change	6.11.1	Indicator for correct answer (0,1)
Token test	6.27.1, 6.27.2, 6.27.3, 6.27.4, 6.27.5, 6.27.6, 6.27.7, 6.27.8, 6.27.9, 6.27.10	Sum of variables 6.27.1-6.27.10 (0-10)	
Language Fluency Factor Score	2 TICS object naming	6.4.6, 6.4.7	Indicator for correct answer (0, 1)
	2 SMSE Object Naming	6.1.14, 6.1.15	Indicator for correct answer (0, 1)
	CSID Questions	6.6.1, 6.6.2, 6.6.3, 6.6.4, 6.6.5, 6.6.6a, 6.6.6b, 6.6.6c	Indicator for correct answer (0, 1)
	Animal Naming	6.3.2, 6.3.3, 6.3.4	Sum of 6.3.2-6.3.4 (Correct Animals Named + Incorrect Animals Named + Repetitions)
	Repeat Phrase	6.1.16	Indicator for correct answer (0, 1)
	3-stage task	6.1.19b	Sum of indicator variables for correctly performing each stage of the task (0-3).
	Follow instructions	6.1.18a	Indicator for correct answer (0,1)
	Write Sentence	6.1.20a	Indicator for correct answer (0,1)
Visuospatial Factor Score	Draw Pentagons	6.1.21a, 6.1.21b	The sum of two indicator variables for two different correct scoring points (0-2).
	Constructional Praxis (Immediate)	6.17.1, 6.17.2, 6.17.3, 6.17.4	Sum of each drawing's (6.17.1-6.17.4) scoring points (0-11).

Outcome Family 2: Job Characteristics and Complexity

2A: Job Strain

A. Primary Outcomes	B. Components (Secondary Outcomes)	C. KLPS-5 C+ Module Q#	D. Variable Construction Notes
Karasek job content Summary Score	How much the respondent agrees that they are satisfied with their job, all things considered.	8.B.1	Components 8.B.1, 8.B.4, and 8.B.9 are reverse coded. As a primary outcome, the job stress summary score is calculated as the mean of 8.B.1, 8.B.2, 8.B.4, 8.B.6, 8.B.7, 8.B.9. We will also include a standardized score that is mean zero and standard deviation of 1. The summary score that is used comes from the HRS methodology.
	How much the respondent agrees that their job is physically demanding	8.B.2	
	How much the respondent agrees that they receive the recognition they deserve from work	8.B.3	
	How much the respondent agrees that their salary is adequate	8.B.4	
	How much the respondent agrees that their job promotion prospects are poor	8.B.5	
	How much the respondent agrees that their job security is poor.	8.B.6	
	How much the respondent agrees that their job is under constant time pressure due to a heavy workload	8.B.7	
	How much the respondent agrees that they have very little freedom to decide how to do the work.	8.B.8	
	How much the respondent agrees that they have the opportunity to develop new skills	8.B.9	
	How much the respondent agrees that they receive adequate support in difficult situations.	8.B.10	
	How much the respondent agrees that they feel they have control over what happens in most situations at work.	8.B.11	
	How much the respondent agrees that they have to work very fast after considering the things they have to do at work.	8.B.12	
	How much the respondent agrees that they often feel bothered or upset by their work	8.B.13	
	How much the respondent agrees that they are free from conflicting demands that others make in their work.	8.B.14	
	How much the respondent agrees that their job interferes with their personal life.	8.B.15	

2B: Job Complexity

A. Primary Outcomes	B. Components (Secondary Outcomes)	C. KLPS-5 C+ Module Q#	D. Variable Construction Notes
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Non-Manual Job Complexity	Non-routine Analytical Scale	<p>8.A.PartA.2- Length of longest document typically read.</p> <p>8.A.PartA.18- The number of math tasks that are typically performed at work.</p> <p>8.A.PartA.8- Length of longest document typically written.</p> <p>8.A.PartB.10- Frequency of undertaking tasks that require at least 30 minutes of thinking.</p>	Each component is standardized to have mean zero and standard deviation of one in the whole sample. The estimate of the individual level skill is the sum of the standardized components.
	Non-routine Interpersonal Scale	<p>8.A.PartB.4- Frequency in spending time at work cooperating or collaborating with coworkers.</p> <p>8.A.PartB.13- Supervises coworkers as a normal part of work.</p> <p>8.A.PartB.6- Amount of involvement in meeting or interacting for at least 10-15 minutes at a time with a customer, client, student or the public.</p> <p>8.A.PartB.12- Makes formal presentations to clients or colleagues as a part of their work.</p>	Each component is standardized to have mean zero and standard deviation of one in the whole sample. The estimate of the individual level skill is the sum of the standardized components.
	Routine Cognitive Scale	<p>8.A.PartB.17- How often does their work involve learning new things.</p> <p>8.A.PartB.14- Amount of autonomy in their jobs.</p> <p>8.A.PartB.16- Amount of repetitive tasks in their jobs.</p>	Each component is standardized to have mean zero and standard deviation of one in the whole sample. The estimate of the individual level skill is the sum of the standardized components.
	Routine Manual Scale	<p>8.A.PartB.3- Operates heavy machiners</p> <p>8.A.PartB.9- Their job is physically demanding</p>	Each component is standardized to have mean zero and standard deviation of one in the whole sample. The estimate of the individual level skill is the sum of the standardized components.
	Non-Routine Manual Scale	<p>8.A.PartB.7- Drives a car, truck or three-wheeler</p> <p>8.A.PartB.8- Repair/maintains electronic equipment</p>	Each component is standardized to have mean zero and standard deviation of one in the whole sample. The estimate of the individual level skill is the sum of the standardized components.

Outcome Family 3: Stress and Discrimination			
3A. Neighborhood disorder and social cohesion			
A. Primary Outcomes	B. Components (Secondary Outcomes)	C. KLPS-5 C+ Module Q#	D. Variable Construction Notes
Social Cohesion Scale	How much the respondent feels that they are part of/don't belong in this area.	9.A.1	Components 9.A.1, 9.A.3, 9.A.5, 9.A.7 are reverse-coded. The Neighborhood social cohesion summary score is calculated as the mean of 9.A.1, 9.A.3, 9.A.5, 9.A.7. Each question is on a scale of 1-7. We will also include a standardized score that is mean zero and standard deviation of 1.
	How much the respondent feels that most people in this area can/can't be trusted.	9.A.3	
	How much the respondent feels most people are friendly/unfriendly in this area.	9.A.5	
	How much the respondent feels if they were in trouble there are lots of people/nobody would help in this area.	9.A.7	
Neighborhood Disorder Scale	How much the respondent feels vandalism and graffiti are no problem/a big problem in this area.	9.A.2	The neighborhood disorder summary score is calculated as the mean of 9.A.2, 9.A.4, 9.A.6, 9.A.8. Each question is on a scale of 1-7. We will also include a standardized score that is mean zero and standard deviation of 1.
	How much the respondent feels safe/afraid walking alone in this area after dark.	9.A.4	
	How much the respondent feels this area is kept clean/always full of rubbish and litter.	9.A.6	
	How much the respondent feels there are no/many vacant or deserted houses or storefronts in this area.	9.A.8	
3B. Ongoing Stress			
A. Primary Outcomes	B. Components (Secondary Outcomes)	C. KLPS-5 C+ Module Q#	D. Variable Construction Notes
Ongoing Stress Scale	Ongoing financial strain.	9.B.1	The ongoing stress summary index is calculated as the mean of 9.B.1, 9.B.2, 9.B.3, 9.B.4, 9.B.5, 9.B.6. Each question is on a scale of 1-4. We will also include a standardized score that is mean zero and standard deviation of 1.
	Ongoing housing problems.	9.B.2	
	Ongoing problems in close relationship.	9.B.3	
	Ongoing alcohol and drug use in family members.	9.B.4	
	Ongoing difficulty at work.	9.B.5	
	Ongoing helping family member or friend who is sick on daily basis.	9.B.6	
3C. Discrimination			
A. Primary Outcomes	B. Components (Secondary Outcomes)	C. KLPS-5 C+ Module Q#	D. Variable Construction Notes

Everyday discrimination Scale	How often the respondent is treated with less courtesy than other people in day-to-day life.	9.C.1	Components 9.C.1, 9.C.2, 9.C.3, 9.C.4, 9.C.5, 9.C.9 are reverse coded. Everyday Discrimination index is calculated as the mean of 9.C.1, 9.C.2, 9.C.3, 9.C.4, 9.C.5, 9.C.9. Each question is on a scale of 1-6. We will also include a standardized score that is mean zero and standard deviation of 1.
	How often the respondent is treated with less respect than other people in day-to-day life.	9.C.2	
	How often the respondent receives poorer service than other people at restaurants or stores in day-to-day life.	9.C.3	
	How often the respondent feels other people act as if they think the respondent is not smart in day-to-day life.	9.C.4	
	How often the respondent feels other people act as if they are afraid of the respondent in day-to-day life.	9.C.5	
	How often the respondent feels they were threatened or harassed in day-to-day life.	9.C.9	
Perceived Ethnic Discrimination Scale	How often have people threatened to hurt the respondent.	9.F.3	The Perceived Ethnic Discrimination Scale is calculated as the mean of 9.F.3, 9.F.5, 9.F.8, 9.F.9, and 9.F.10. Each question is on a scale of 1-3. We will also include a standardized score that is mean zero and standard deviation of 1.
	How often have policeman or security officers been unfair to the respondent.	9.F.5	
	How often have others made the respondent feel like an outsider who doesn't fit in because of their dress, speech, or other characteristics related to their ethnicity.	9.F.8	
	How often has the respondent been treated unfairly by co-workers or classmates.	9.F.9	
	How often have others hinted that the respondent is dishonest or can't be trusted.	9.F.10	

Outcome Family 4: Social contacts and social capital			
4A: Macarthur Ladder Scale of Subjective Social Status			
A. Primary Outcomes	B. Components (Secondary Outcomes)	C. KLPS-5 C+ Module Q#	D. Variable Construction Notes
Perceived Social Status		9.A.1	Part of the Macarthur Ladder Scale of Subjective Social Status. Scale is 1-10.
	Aspiring Social Status	9.A.2	Part of the Macarthur Ladder Scale of Subjective Social Status. Scale is 1-10.
4B: Relationship Quality and Social Support			
A. Primary Outcomes	B. Components (Secondary Outcomes)	C. KLPS-5 C+ Module Q#	D. Variable Construction Notes
Lubbers Social Network-6 Index	Family: size.	10.C.1	The LSNS-6 index is constructed as the sum of 10.C.1, 10.C.2, 10.C.3, 10.C.4, 10.C.5, 10.C.6. The clinical cutpoint for risk of social isolation is 12. In other words, an LSNS-6 score below 12 indicates that the individual is at risk for social isolation.
	Family: discuss private matters.	10.C.2	
	Family: call for help.	10.C.3	
	Friend/neighbor: size.	10.C.4	
	Friend/neighbor: discuss private matter.	10.C.5	
	Friend/neighbor: call for help.	10.C.6	
Spouse Social Support Summary Score	How much the respondent feels their spouse really understands the way they feel about things.	10.D.1a	10.D.1d, 10.D.1e, and 10.D.1f are reverse coded. The spouse social support summary score is calculated by taking the mean of 10.D.1a-10.D.1f. We will also include a standardized score that is mean zero and standard deviation of 1. We will also calculate a mean effect index across qualities of relationship types for a global social support summary score.
	How much the respondent feels they can rely on their spouse if they have a serious problem.	10.D.1b	
	How much the respondent feels they can open up to their spouse when they need to talk about their worries.	10.D.1c	
	How much the respondent feels their spouse criticizes them.	10.D.1d	
	How much the respondent feels their spouse lets them down when they are counting on them.	10.D.1e	
	How much the respondent feels their spouse gets on their nerves.	10.D.1f	
Children Social Support Summary Score	How much the respondent feels their children really understand the way they feel about things.	10.D.4a	10.D.4d, 10.D.4e, and 10.D.4f are reverse coded. The children social support summary score is calculated as the mean of 10.D.1-10.D.4f. We will also include a standardized score that is mean zero and standard deviation of 1. We will also calculate a mean effect index across qualities of relationship types for a global social support summary score.
	How much the respondent feels they can rely on their children if they have a serious problem.	10.D.4b	
	How much the respondent feels they can open up to their children when they need to talk about their worries.	10.D.4c	
	How much the respondent feels their children criticize them.	10.D.4d	
	How much the respondent feels their children let them down when they are counting on them.	10.D.4e	
	How much the respondent feels their children get on their nerves.	10.D.4f	
	How much the respondent feels their other immediate family members really understand the way they feel about things.	10.D.6a	

Other immediate family members support summary score.	How much the respondent feels they can rely on their other immediate family members if they have a serious problem.	10.D.6b	10.D.6d, 10.D.6e, 10.D.6f are reverse coded. The other immediate family members support summary score is calculated as the Mean of 10.D.5-10.D.6f. We will also include a standardized score that is mean zero and standard deviation of 1. We will also calculate a mean effect index across qualities of relationship types for a global social support summary score.
	How much the respondent feels they can open up to their other immediate family members when they need to talk about their worries.	10.D.6c	
	How much the respondent feels their other immediate family members criticize them.	10.D.6d	
	How much the respondent feels their other immediate family members let them down when they are counting on them.	10.D.6e	
	How much the respondent feels their other immediate family members get on their nerves.	10.D.6f	
Friends support summary score	How much the respondent feels their friends really understand the way they feel about things.	10.D.8a	10.D.8d, 10.D.8e, and 10.D.8f are reverse coded. The friends support summary score is calculated as the mean of 10.D.7-10.D.8f. We will also include a standardized score that is mean zero and standard deviation of 1. We will also calculate a mean effect index across qualities of relationship types for a global social support summary score.
	How much the respondent feels they can rely on their friends if they have a serious problem.	10.D.8b	
	How much the respondent feels they can open up to their friends when they need to talk about their worries.	10.D.8c	
	How much the respondent feels their friends criticize them.	10.D.8d	
	How much the respondent feels their friends let them down when they are counting on them.	10.D.8e	
	How much the respondent feels their friends get on their nerves.	10.D.8f	
4C: Loneliness			
A. Primary Outcomes	B. Components (Secondary Outcomes)	C. KLPS-5 C+ Module Q#	D. Variable Construction Notes
Loneliness Summary Score	How often the respondent feels they lack companionship.	10.E.1	The primary loneliness summary score is calculated as the mean of 10.E.1-10.E.4. A secondary loneliness summary score will be calculated as the mean of 10.E.1-10.E.11 and compared with the primary summary score. We will also include a standardized score that is mean zero and standard deviation of 1.
	How often the respondent feels left out.	10.E.2	
	How often the respondent feels isolated from others.	10.E.3	
	How often the respondent feels in tune with the people around them.	10.E.4	
	How often respondent feel lonely.	10.E.5	
	How often respondent feel that there are people they can talk to.	10.E.6	
	How often respondent feel that there are people they can turn to.	10.E.7	
	How often respondent feel that there are people who can really understand them.	10.E.8	
	How often respondent feel that there are people close to them.	10.E.9	
	How often respondent feel that they are part of a group of friends.	10.E.10	
How often respondent feel that they have a lot of common with the people around them.	10.E.11		

Outcome Family 5: Air Pollution			
5A: Contemporaneous air pollution exposure			
A. Primary Outcomes	B. Components (Secondary Outcomes)	C. KLPS-5 C+ Module Q#	D. Variable Construction Notes
Mean PM2.5 exposure at the time of survey.			For respondents with available Atmotube measures, we will use real-time air pollution readings from portable PM sensors (Atmotube) during the time of survey as their measurements of short-term exposure. We will construct variables of the average and max PM 2.5 reading over 15-minute intervals over the course of the survey.
Max PM2.5 exposure at the time of survey.			For respondents with available Atmotube measures, we will take real-time air pollution readings from portable PM sensors (Atmotube) during the time of survey as their measurements of short-term exposure. We will construct variables of the average and max PM 2.5 15-minute intervals over the course of the survey. We may explore comparisons between cumulative and short term exposure measured via satellites.
5B: Cumulative air pollution exposure (Construction of measures and indices will be determined)			
A. Primary Outcomes	B. Components (Secondary Outcomes)	C. KLPS-5 C+ Module Q#	D. Variable Construction Notes
Cumulative PM2.5 exposure		KLPS 1-5 Historical migration data.	A measure of cumulative air pollution exposure can be calculated by combining historical satellite remote sensing measures of PM2.5 with detailed place of residence and migration data from KLPS, which collected migration histories as part of each round. We plan to combine this information with remote sensing PM2.5 levels to establish the mean cumulative exposure to PM2.5 by computing the weighted averages of satellite-derived air pollution levels at the residences of the respondents. This calculation will take into account the duration respondents spent at each location.
		Surface PM2.5 data from Atmospheric Composition Analysis Group at Washington University in St. Louis	
5C: Midlife and lifetime air pollution exposure metric (Construction of measures and indices will be determined)			
A. Primary Outcomes	B. Components (Secondary Outcomes)	C. KLPS-5 C+ Module Q#	D. Variable Construction Notes
Household air pollution measures	Use of clean cookstove as their main cookstove	11.A.1	A respondent is said to have a clean cookstove if they use any of the following types of cookstoves for cooking (11.A.1): electric stove, solar cooker, liquified petroleum gas (LPG) gas stove, piped natural gas stove, biogas stove. Otherwise the variable is equal to 0.
	Use of clean lighting	11.A.10	A respondent is said to have clean lighting if they use an of the following types of lighting at home: Electricity, solar lantern, rechargeable flashlight/torch/lantern, battery powered flashlight/torch/lantern, or biogas lamp. Otherwise the variable is equal to 0.

Occupational Exposure measures	Hours spent doing vigorous physical activities outdoors in a week	11.B.1, 11.B.2a, 11.B.2b	We convert questions about days per week doing the activity (11.B.1), and time usually spent on one of those days (11.B.2a, 11.B.2b) engaging in that activity into a measure of hours per week.
	Hours spent doing vigorous physical activities indoors in a week	11.B.1, 11.B.3a, 11.B.3b	We convert questions about days per week doing the activity (11.B.1), and time usually spent on one of those days (11.B.3a, 11.B.3b) engaging in that activity into a measure of hours per week.
	Hours spent doing moderate physical activities outdoors in a week	11.B.4, 11.B.5a, 11.B.5b	We convert questions about days per week doing the activity (11.B.4), and time usually spent on one of those days (11.B.5a, 11.B.5b) engaging in that activity into a measure of hours per week.
	Hours spent doing moderate physical activities indoors in a week	11.B.4, 11.B.6a, 11.B.6b	We convert questions about days per week doing the activity (11.B.4), and time usually spent on one of those days (11.B.6a, 11.B.6b) engaging in that activity into a measure of hours per week.
	Hours spent walking outdoors in a week	11.B.7, 11.B.8a, 11.B.8b	We convert questions about days per week doing the activity (11.B.7), and time usually spent on one of those days (11.B.8a, 11.B.8b) engaging in that activity into a measure of hours per week.
Transport Exposure measures	Hours spent traveling in a motor vehicle to work in a week (at most 4 types of motor vehicles)	11.B.12a, 11.B.12b	We convert questions about days per week doing the activity (11.B.12a), and time usually spent on one of those days (11.B.12b) engaging in that activity into a measure of hours per week.
	Hours spent bicycling to work in a week	11.B.13, 11.B.14	We convert questions about days per week doing the activity (11.B.13), and time usually spent on one of those days (11.B.14a, 11.B.14b) engaging in that activity into a measure of hours per week.
	Hours spent walking to work in a week	11.B.15, 11.B.16	We convert questions about days per week doing the activity (11.B.15), and time usually spent on one of those days (11.B.16a, 11.B.16b) engaging in that activity into a measure of hours per week.

Appendix A: KLPS-5 C+ Module survey instrument.

Note: This Appendix contains the survey instrument used for Wave 2 of data collection. Sensitive sections and copyrighted materials have been removed.

Section 1: Consent	3
Section 2: Confirmation of Identity	3
Section 4. Household Roster	3
Section 5: Current Health Status	4
A: Happiness and Depressive Symptoms	4
B: Perceived Stress Scale-10 (New)	5
C. Sleep	7
D. Pain	7
E. Food Security	8
Section 6: Cognition	8
Section 6.1: Swahili Mental State Exam	8
Section 6.2: 10-Word List Recall Immediate	19
Section 6.3: Animal Naming	24
Section 6.4 Object Naming	26
Section 6.5: Symbol Cancellation Task	27
Section 6.6: Community Screening Instrument for Dementia (CSI-D; 4 items)	31
Section 6.8: Raven's Tests	33
Section 6.9: Forward and Backward Digit Span	35
Section 6.10: Similarities and Differences: Judgment and Problem Solving	36
Section 6.11: Making Change	37
Section 6.12: Clock Drawing	38
Section 6.13: 10-Word List Recall: Delayed	39
Section 6.14: Word List Recognition	41
Section 6.15: Story Recall Immediate #1	43
Section 6.16: Story Recall Immediate #2	45
Section 6.17: Constructional Praxis Immediate	49
Section 6.18: Trailmaking Test	54
Section 6.19: Go/No-Go Trial	60
Section 6.20: Hand Movement Sequencing Test	63
Section 6.21: Found a Lost Child	66
Section 6.23: Story Recall Delayed #1	66
Section 6:24: Story Recall Delayed #2	72

Section 6.25: Story Recall: Recognition	77
Section 6.26: Constructional Praxis (Delayed Recall)	79
Section 6.27: Token Test	81
Survey Break - 3 minutes	82
Section 7: Occupation and Earnings	83
A. Farming/ Agriculture	83
C. Wage Employment	86
D. Main Occupation Selection	88
Section 8: Occupational Complexity and Job Characteristics	89
A. Work Skills	89
B. Karasek job content questionnaire	110
Section 9: Stress and Discrimination	113
A: Neighborhood disorder/Social cohesion	113
B: Ongoing Stress	115
C. Everyday Discrimination	117
F. Perceived Ethnic Discrimination Questionnaire- Community Version	119
Section 10: Social contacts and social capital	120
A. MacArthur Ladder	120
C. Lubbens Social Network Scale- 6 item	122
D. HRS Relationship Quality and Social Support	123
Relationship: Spouse	123
Relationship: Children	125
Relationship: Family members	127
Relationship: Friends	129
E. Loneliness	131
Section 11: Pollution	132
A. Indoor Pollution Exposures	132
B. Physical Exercise	137
Job-Related Physical Activity	137
Use Transportation Physical Activity	139
Section 12: Conclusion	141

Section 1: Consent

Section 2: Confirmation of Identity

[There is no Section 3]

Section 4. Household Roster

Read: Now I would like to find out about the individuals in your household. By your household, I mean the place where you usually sleep, not necessarily your ancestral lands or family home. By the individuals in your household, I mean those who “eat from the same pot” and spend 4 nights or more in a typical week sleeping in your household. **[DO NOT READ]** Note separate instructions in upcoming questions for FRs who are live-in house help or live-in guards.

Read: Sasa ningependa kujua kuhusu watu wa nyumba yako. Kwa nyumba yako, ninamaanisha mahali unapolala, sio lazima nyumbani kwa mababu zako(ancestral lands) au nyumba ya familia (family house). Kwa watu wa nyumba yako, ninamaanisha wale "wanaokula kutoka chungu kimoja" na hulala usiku 4 au zaidi kwa wiki ya kawaida kwa nyumba yako. **[DO NOT READ]** Note separate instructions in upcoming questions for FRs who are live-in house help or live-in guards.

2. Let's first start with adults between the ages of 18-65. How many adults between the ages of 18-65 (other than yourself) are in your household, “eat from the same pot” and spend 4 nights or more in an average week sleeping in your home? By your household, I mean the place where you usually sleep, not necessarily your ancestral lands or family home. ***If the FR is live-in house help or a live-in guard and has a spouse or adult dependent(s) staying with them at the employer's house, only include these spouse/dependent(s) on the household roster (do not count their employer or the employer's family as part of the FR's household).***

Kwanza, tuanze na watu wazima walio kati ya miaka 18-65. Ni watu wangapi wazima(adults)wangepi walio na umri kati ya miaka 18-65 (kando na wewe mwenyewe) wako katika nyumba yako/yenu,“hula kutoka chungu kimoja” na hulala usiku 4 au zaidi kwa wiki ya kawaida kwa nyumba yako/yenu? Kwa nyumba yako/yenu, namaanisha mahali unapolala,sio lazima nyumbani kwa mababu zako(ancestral lands) au nyumba ya familia (family house). ***If the FR is live-in house help or a live-in guard and has a spouse or adult dependent(s) staying with them at the employer's house, only include these spouse/dependent(s) on the household roster (do not count their employer or the employer's family as part of the FR's household).***

3. How many adults from 66(other than yourself) are in your household, “eat from the same pot” and spend 4 nights or more in an average week sleeping in your home? By your household, I mean the place where you usually sleep, not necessarily your ancestral lands or family home. ***If the FR is live-in house help or a live-in guard and has a spouse or adult dependent(s) staying with them at the employer’s house, only include these spouse/dependent(s) on the household roster (do not count their employer or the employer’s family as part of the FR’s household).***

Ni watu wangapi walio na miaka 66 na zaidi (kando na wewe mwenyewe) wako katika nyumba yako/yenu,”hula kutoka chungu kimoja” na hulala usiku 4 au zaidi kwa wiki ya kawaida kwa nyumba yako/yenu? Kwa nyumba yako/yenu, namaanisha mahali unapolala,sio lazima nyumbani kwa mababu zako(ancestral lands) au nyumba ya familia (family house) ***If the FR is live-in house help or a live-in guard and has a spouse or adult dependent(s) staying with them at the employer’s house, only include these spouse/dependent(s) on the household roster (do not count their employer or the employer’s family as part of the FR’s household).***

4. How many children under the age of 18 are in your household and “eat from the same pot” and spend 4 nights or more in an average week sleeping in your home? Again, by your household, I mean the place where you usually sleep, not necessarily your ancestral lands or family home. ***If the FR is live-in house help or a live-in guard and has non-adult dependent(s) staying with them at the employer’s house, only include these dependent(s) on the household roster (do not count their employer or the employer’s family as part of the FR’s household).***

Ni watoto wangapi walio chini ya miaka 18 wako katika nyumba yako/yenu,”hula kutoka chungu kimoja” na hulala usiku 4 au zaidi kwa wiki ya kawaida kwa nyumba yako/yenu? Kwa nyumba yako/yenu, namaanisha mahali unapolala,sio lazima nyumbani kwa mababu zako(ancestral lands) au nyumba ya familia (family house) ***If the FR is live-in house help or a live-in guard and has non-adult dependent(s) staying with them at the employer’s house, only include these dependent(s) on the household roster (do not count their employer or the employer’s family as part of the FR’s household).***

Section 5: Current Health Status

Read: Thank you. Let’s move on. In this section of the survey, I will ask you questions about your mental health. Please remember that this survey is confidential and that the information will be used for research purposes only.

Read: Asante. Wacha tuendele. Katika sehemu hii ya mahojiano,nitakuuliza maswali kuhusu afya yako ya kiakili. Tafadhali kumbuka kwamba mahojiano haya ni ya kisiri na kwamba habari itatumika kwa madhumuni ya utafiti pekee.

A: Happiness and Depressive Symptoms

1. On a scale of 1-7, with 1 being sad and 7 being happy, how do you feel right now?

Kwa kiwango cha 1-7, 1 ikiwa ni mwenye huzuni na 7 ikiwa ni mwenye furaha, unajisikiaje sasa hivi?

B: Perceived Stress Scale-10 (New)

<p>Read: Next, I would like to ask you about your feelings and thoughts during the last 30 days. Read: I fuatayo, ningependa kukuuliza kuhusu hisia na mawazo yako katika kipindi cha siku 30 zilizopita.</p> <p>Show the respondent the show card #1 . Demonstrate that they should select their response using the scale.</p> <p>1=Never 2=Almost never 3=Sometimes 4=Fairly often 5=Very often 666=(Do not read): Refuses to answer 999=(Do not read): Don't know</p>		
1	<p>In the last 30 days, how often have you been upset because of something that happened unexpectedly? Katika siku 30 zilizopita, ni mara ngapi umekasirika kwa sababu ya jambo lililotokea bila kutarajia?</p>	<input type="text"/>
2	<p>In the last 30 days, how often have you felt that you were unable to control the important things in your life? Katika siku 30 zilizopita, ni mara ngapi umehisi kwamba hukuweza kudhibiti mambo muhimu katika maisha yako?</p>	<input type="text"/>
3	<p>In the last 30 days, how often have you felt nervous and stressed?</p>	<input type="text"/>

	Katika siku 30 zilizopita, ni mara ngapi umehisi wasiwasi na msongo wa mawazo(stressed)?	
4	In the last 30 days, how often have you felt certain in your ability to overcome your own personal problems? Katika siku 30 zilizopita, ni mara ngapi umehisi kuwa na uhakika katika uwezo wako wa kushinda matatizo yako binafsi?	__
5	In the last 30 days, how often have you felt that things were going your way? Katika siku 30 zilizopita, ni mara ngapi umehisi kwamba mambo yalikuwa yakienda kwa njia yako?	__
6	In the last 30 days, how often did you feel that the problems were too much for you to manage? Katika siku 30 zilizopita, ni mara ngapi ulihisi kwamba matatizo yalikuwa mengi sana kwako kusimamia?	__
7	In the last 30 days, how often have you been able to control irritations in your life? Katika siku 30 zilizopita, ni mara ngapi umeweza kudhibiti kero katika maisha yako?	__
8	In the last 30 days, how often have you felt that you were on top of things? Katika siku 30 zilizopita, ni mara ngapi umeweza kudhibiti (control) mambo yako?	__
9	In the last 30 days, how often have you been angered because of things that happened that were outside of your control? Katika siku 30 zilizopita, ni mara ngapi umekasirishwa kwa sababu ya mambo yaliyotokea ambayo yalikuwa nje ya uwezo wako?	__
10	In the last 30 days, how often have you felt difficulties were piling up so high that you could not overcome them?	__

	666= Refused 999= Don't know
--	---------------------------------

E. Food Security

1. How many meals did you eat yesterday? Tea (chai) itself is not to be considered as a meal. (999=DK)

Ulikula mlo ngapi jana ? Chai bure haihesabiwi kama mlo.

2a. How many of these meals included meat, fish, or chicken? Omena/Fulu (small fish) should be included, but eggs should not. (999=DK) Ni ngapi kati ya mlo hii ilikuwa ya nyama,samaki au kuku. Omena/Fulu inahesabiwa lakini mayai haihesabiwi

b. How many of these meals included eggs?

Ni ngapi kati ya mlo hii ilikuwa na mayai?

Section 6: Cognition

Section 6.1: Swahili Mental State Exam

In the next section, I will ask questions and have you do simple things to check how your brain is functioning. Sometimes it is hard, don't worry. Answer the questions the best you can. You have 10 seconds for most questions.

Katika sehemu inayofuata, nitauliza maswali na kukufanya ufanye mambo rahisi kuangalia jinsi ubongo wako unavyofanya kazi. Wakati mwingine ni vigumu, usijali. Jibu maswali vizuri uwezavyo. Una sekunde 10 kwa maswali mengi.

[ENUMERATOR NOTE: IF THE RESPONDENT DOESN'T UNDERSTAND THE QUESTION, TRY TO CLARIFY/REPHRASE (UNLESS OTHERWISE NOTED IN THE INSTRUCTIONS). ALSO, ONLY SELECT "DON'T KNOW" WHEN THE RESPONDENT REALLY DOESN'T KNOW, AND NOT BECAUSE THEY DON'T UNDERSTAND THE WORDING. IF THEY DON'T UNDERSTAND THE WORDING, THEN TRY TO REPHRASE/CLARIFY (UNLESS OTHERWISE NOTED).]

[ENUMERATOR NOTE: BEFORE BEGINNING THE SURVEY, MAKE SURE YOU KNOW THE NAME OF THE VILLAGE YOU ARE IN AND THE LOCATION OF LOCAL MARKETS SO THAT YOU CAN VERIFY THE FR'S RESPONSES.]

1. What year is it?

Huu ni mwaka gani?

[ENUMERATOR NOTE: The correct answer should be 2023. If the respondent answers 23 instead of 2023 then say, "Please give me the complete year". Probe if the respondent did not interpret the question correctly.]

0=Incorrect response | 1=Correct response | 999= Don't Know | 666=Refused

2. Which season of the year is this?

Huu ni msimu gani?

[ENUMERATOR NOTE: ACCEPTABLE ANSWERS INCLUDE WEATHER SEASON (LONG RAIN, SHORT RAIN, RAINY, DROUGHT), FESTIVE SEASON (CHRISTMAS), AGRICULTURAL SEASON (WEEDING, HARVESTING, PLANTING, TILLING), RELIGIOUS SEASON (RAMAHDHAN, EASTER), ELECTION SEASON. ENSURE IT IS THE RIGHT ONE AT THE TIME OF THE SURVEY. PROBE IF THE RESPONDENT DID NOT INTERPRET THE QUESTION CORRECTLY

0=Incorrect response | 1=Correct response | 999= Don't Know | 666=Refused

2a. **[DO NOT READ OUT LOUD]** What did the respondent say? _____

3. What month is it?

Huu ni mwezi gani?

[ENUMERATOR NOTE: IF THE RESPONDENT SAYS A NUMERIC ANSWER, SUCH AS THE "12TH MONTH OF THE YEAR", THEN SAY "YES, BUT WHICH MONTH IS IT?]

0=Incorrect response | 1= Correct response | 999= Don't Know | 666=Refused

4. What is today's date?

Tarehe ya leo ni gani?

0= Incorrect response | 1=Correct response | 999= Don't Know | 666=Refused

5. What day of the week is it?

Leo ni siku gani ya juma?

[ENUMERATOR NOTE: IF THE RESPONDENT SAYS A NUMERIC ANSWER, SUCH AS "IT IS 2ND DAY OF WEEK", THEN SAY "YES, BUT WHICH DAY IS IT?"]

0=Incorrect response | 1=Correct response | 999= Don't Know | 666=Refused

6. What county are we in right now?

Tuko katika county gani hivi sasa?

0=Incorrect response | 1=Correct response | 999= Don't Know | 666=Refused

7. What is the name of this city/town/village?

Jina la jiji/mji huu/kijiji hiki ni gani?

0=Incorrect response | 1=Correct response | 999= Don't Know | 666=Refused

8. **[DO NOT READ] WHERE IS THE INTERVIEW TAKING PLACE?**

1= Respondent's home -> Q8a | 2= Office building -> 9 | 3= Outdoor -> Q8a

8a. **[If Q8=1 OR Q8=3]** What is this place we are in right now used for?

Je, Mahali tulipo sasa hivi hutumika kufanya nini?

[ENUMERATOR NOTE: HERE WE WOULD LIKE TO KNOW THE CURRENT PLACE OF THE FR'S HOUSE IS USED FOR. FOR EXAMPLE, EATING, SLEEPING, COOKING, ETC.]

0=Incorrect response | 1= Correct response | 999= Don't Know | 666=Refused

8b. **[If Q8=1 OR Q8=3]** What is the name of this part of the city/town/village?

[ENUMERATOR NOTE: CORRECT RESPONSE IS IF THEY GIVE A CLEAR NAME OR LOCATION OF THE AREA.]

Sehemu hii ya mji/jiji/Kijiji inaitwaje?

0=Incorrect response | 1= Correct response | 999= Don't Know | 666=Refused

9a. **[If Q8=2]** What is the name of the building we are in right now?

Jengo tuliyomo sasa hivi inaitwaje?

[ENUMERATOR NOTE: CORRECT ANSWER SHOULD BE THE NAME OF THE BUILDING THAT THE SURVEY IS TAKING PLACE IN, NOT THE ROAD OR AREA OF TOWN. FOR EXAMPLE, IF IT IS IN THE IPA BUILDING, THEN THE CORRECT ANSWER SHOULD BE INNOVATION FOR POVERTY ACTION, OR IPA BUILDING.]

0=Incorrect response | 1=Correct response | 999= Don't Know | 666=Refused

9a1. **[DO NOT READ] [If Q8=2]** Please write what the respondent said.

9a2. **[DO NOT READ] [If Q8=2]** How well did the respondent understand the question?

0= Did not understand at all | 1=Did not understand well (2 or more repeats or clarifications) | 2=Somewhat understood (1 repeat or clarification) | 3= Understood

9b. **[If Q8=2]** What floor are we on?

Je, tuko kwenye sakafu gani?

[ENUMERATOR NOTE: CORRECT ANSWER IS THE FLOOR THAT THE SURVEY IS TAKING PLACE IN]

0=Incorrect response | 1=Correct response | 999= Don't Know | 666=Refused

9b1. **[DO NOT READ] [If Q8=2]** Please write what the respondent said.

9b2. **[DO NOT READ] [If Q8=2]** How well did the respondent understand the question?

0= Did not understand at all | 1=Did not understand well (2 or more repeats or clarifications) | 2=Somewhat understood (1 repeat or clarification) | 3= Understood

10. Now I am going to tell you the names of three objects and I would like you to repeat them back to me. Are you ready? Let's begin.

Sasa nitakuambia majina ya vitu vitatu na ningependa uyarudie tena. Je, uko tayari? Hebu tuanze.

a.	b.	c.
[Enumerator Note: SAY THE FOLLOWING WORDS SLOWLY AT 1-SECOND INTERVALS]	I will repeat the names of the three objects again. Once I am done, please repeat them back to me. Nitarudia majina ya vitu hivyo vitatu tena .Mara tu nitakapomaliza, tafadhali yarudie tena.	I will now repeat the names of the three objects one last time. Once I am done, please repeat them back to me. Sasa nitarudia majina ya vitu hivyo vitatu mara ya mwisho. Mara tu nitakapomaliza, tafadhali yarudie tena.

	[Enumerator Note: SAY THE FOLLOWING WORDS SLOWLY AT 1-SECOND INTERVALS]	[Enumerator Note: SAY THE FOLLOWING WORDS SLOWLY AT 1-SECOND INTERVALS]
Car Gari	Car Gari	Car Gari
House Nyumba	House Nyumba	House Nyumba
Fish Samaki	Fish Samaki	Fish Samaki
Now please repeat them back to me. Sasa tafadhali zirudie	Now please repeat them back to me. Sasa tafadhali zirudie	Now please repeat them back to me. Sasa tafadhali zirudie
10a. [DO NOT READ] HOW MANY WORDS DID THE RESPONDENT REPEAT CORRECTLY? 0=None 1=1 Correct 2= 2 Correct 3= 3 Correct If Q10a=3 -> Go to Q11 If Q10a=0 OR 1 OR 2 -> Got to Q10aa	10b. [DO NOT READ] HOW MANY WORDS DID THE RESPONDENT REPEAT CORRECTLY? 0=None 1=1 Correct 2= 2 Correct 3= 3 Correct If Q10b=3 -> Go to Q11 If Q10b= 0 OR 1 OR 2 -> Go to Q10ab	10c. [DO NOT READ] HOW MANY WORDS DID THE RESPONDENT REPEAT CORRECTLY? 0=None 1=1 Correct 2= 2 Correct 3= 3 Correct If Q10c=3 -> Go to Q11 If Q10c= 0 OR 1 OR 2 -> Go to Q10ac
10aa [DO NOT READ] HOW MANY WORDS DID THE RESPONDENT SAY THAT ARE NOT ON THE LIST? 1= 1 2= 2 3=3 → Go to next round, then 10b	10ab [DO NOT READ] HOW MANY WORDS DID THE RESPONDENT SAY THAT ARE NOT ON THE LIST? 1= 1 2= 2 3=3 → Go to next round, then 10c	10ac [DO NOT READ] HOW MANY WORDS DID THE RESPONDENT SAY THAT ARE NOT ON THE LIST 1= 1 2= 2 3=3 → Go to Q11

Very good, now try to remember these words because I will ask you about them later.
 Vizuri sana, sasa jaribu kukumbuka maneno haya kwa sababu nitakuuliza kuyahusu baadaye.

{Calculate the number of trials until all three words are recalled successfully.}

11. Now I'd like you to subtract 7 from 100. Then keep subtracting 7 from each answer until I tell you to stop. Let's start with the first subtraction.

Sasa ningependa utoe 7 kutoka kwa 100.kisha endelea kutoa 7 kutoka kwa kila jibu hadi nikuambie uache. Hebu tuanze na kutoa kwanza.

[ENUMERATOR NOTE: RECORD THE PARTICIPANT'S RESPONSES. SCORE THE TOTAL NUMBER OF CORRECT ANSWERS. CORRECT SUBTRACTIONS ARE 7 LESS THAN THE PREVIOUS NUMBER GIVEN.]*If the respondent says Dk then skin to closing statement "You can stop now"*

a. Number 1	b. Number 2	c. Number 3	d. Number 4	e. Number 5
What is 100 take away 7?	And 7 from that equals what?			
Ni nini 100 ukitoa 7?	Na hiyo ukitoa 7 ni nini?			
Ans__	Ans__	Ans__	Ans__	Ans__

You can stop now.
 Unaweza kuacha sasa.

12. Please name the days of the week in backwards order starting from Sunday. Tafadhali taja siku za juma kwa mpangilio wa kurudi nyuma ukianza na jumapili.

a. Day 1	b. Day 2	c. Day 3	d. Day 4	e. Day 5	f. Day 6
-----------------	-----------------	-----------------	-----------------	-----------------	-----------------

<u>Select One</u> a. Saturday b. Friday c. Thursday d. Wednesday e. Tuesday f. Monday g. Not Mentioned	<u>Select One</u> a. Saturday b. Friday c. Thursday d. Wednesday e. Tuesday f. Monday g. Not Mentioned	<u>Select One</u> a. Saturday b. Friday c. Thursday d. Wednesday e. Tuesday f. Monday g. Not Mentioned	<u>Select One</u> a. Saturday b. Friday c. Thursday d. Wednesday e. Tuesday f. Monday g. Not Mentioned	<u>Select One</u> a. Saturday b. Friday c. Thursday d. Wednesday e. Tuesday f. Monday g. Not Mentioned	<u>Select One</u> a. Saturday b. Friday c. Thursday d. Wednesday e. Tuesday f. Monday g. Not Mentioned
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13. A few minutes ago, I asked you to remember the names of three objects. Now what were the three objects that I asked you to remember?

[Dakika chache zilizopita, nilikuuliza ukumbuke majina ya vitu vitatu, sasa ni vitu gani vitatu ambavyo nilikuuliza uvikumbuke?](#)

0= None correct | 1= 1 Correct | 2= 2 Correct | 3= 3 Correct | 666=Refused

13a. **[DO NOT READ]** How many words did the respondent remember?

13b. **[DO NOT READ]** HOW MANY WORDS DID THE RESPONDENT SAY THAT ARE NOT ON THE LIST?

I will now point to different objects and I would like you to tell me the name of the object.

[Sasa nitakuelekeza kwa vitu tofauti na ningependa uniambie jina la kitu hicho.](#)

[ENUMERATOR NOTE: HAVE THE WATCH AND PENCIL READY BEFORE PROCEEDING TO THE QUESTION]

14. **[ENUMERATOR NOTE: POINT TO WATCH]**

What is this called?

[Hii inaitwa nini?](#)

[ENUMERATOR NOTE: CORRECT ANSWER IS WATCH/SAA]

0= Incorrect response | 1= Correct response | 999= Don't Know | 666=Refused

15. **[ENUMERATOR NOTE: SHOW PENCIL]**

What is this called?

[Hii inaitwa nini?](#)

[ENUMERATOR NOTE: CORRECT ANSWER IS PENCIL/PENSELI]

0= Incorrect response | 1= Correct response | 999= Don't Know | 666=Refused

16. Now I would like you to repeat what I say. ARE YOU READY? LET'S BEGIN.: 'Give us we get it so we give it to Taaka.'
Sasa ningependa urudie kile ninachosema: UKO TAYARI? TUANZE. 'Tupe tupate tumpatie Taaka.'

[ENUMERATOR NOTE: THE RESPONDENT IS ALLOWED ONLY ONE ATTEMPT TO SAY THE PHRASE. THE INTERVIEWER CANNOT REPEAT THE PHRASE IF THE RESPONDENT HAS ALREADY ATTEMPTED THE PHRASE. IF THE RESPONDENT STRUGGLES TO HEAR THE PHRASE, THE INTERVIEWER CAN REPEAT THE PHRASE UP TO FIVE TIMES.]

[DO NOT READ: Did the respondent repeat the phrase correctly?]

0= Incorrect response | 1= Correct response | 999= Don't Know | 666=Refused

17a. Can you read?

Je, unaweza kusoma?

2 = No | 1 = Yes | 999= Don't Know | 666=Refused

17b. Can you write?

Je, unaweza Kuandika?

2 = No | 1 = Yes | 999= Don't Know | 666=Refused

18a. **[If Q17a = 1]** This next part involves a task where I ask you to read the bolded words that are on the screen and follow the instructions. Are you ready? Let's begin.

Sehemu inayofuata inahusisha kazi ambapo nitakuuliza usome maneno yalioekwa nyusi zaidi ambayo yako kwenye screen na ufuate maagizo. Uko tayari? Hebu tuanze.

[ENUMERATOR NOTE: HAND THE PERSON THE TABLET WITH 'CLOSE YOUR EYES' ('FUNGA MACHO') ON IT. IF THE SUBJECT READS AND DOES NOT CLOSE THEIR EYES, Say "DO WHAT THIS SAYS". THIS CAN BE REPEATED UP TO THREE TIMES. SCORE ONLY IF THE SUBJECT CLOSES THEIR EYES.]

[DO NOT READ: Did the respondent follow the instructions? (Mark all that apply)]

0 = Error/Omission (e.g. Respondent did not close eyes)

1 = Respondent closed eyes

2 = Respondent read the phrase aloud

You can open your eyes now.

Unaweza kufungua macho yako sasa

18b. **[If Q17a = 0]** This next part involves a task where I will do something and ask you to copy what I do. Please observe and copy what I do.

Sehemu inayofuata inahusisha kazi ambayo nitafanya jambo na nikuulize unakili kile nitakachofanya. Tafadhali angalia na unakili nitakachofanya.

[ENUMERATOR NOTE: CLOSE YOUR EYES, THEN OPEN THEM. PLEASE KEEP YOUR EYES CLOSED FOR 1-2 SECONDS. IF THE RESPONDENT DOES NOT CLOSE THEIR EYES, SAY “PLEASE OBSERVE AND COPY WHAT I DO” AND . REPEAT THE INSTRUCTIONS AND CLOSE AND OPEN YOUR EYES AGAIN. THIS CAN BE REPEATED UP TO THREE TIMES. SCORE ONLY IF THE SUBJECT CLOSES THEIR EYES.]

[DO NOT READ: Did the respondent follow the instructions?]

0= Doesn't close their eyes | 1= Closes their eyes | 888= Refused

You can open your eyes now.

Unaweza kufungua macho yako sasa

19a. Are you right- or left-handed?

Unatumia mkono wa kushoto au kulia?

1= Right-handed | 2 = Left-handed

19b. **[ENUMERATOR NOTE: HAVE A PIECE OF PAPER READY BEFORE STARTING THIS QUESTION. TAKE THE PIECE OF PAPER AND HOLD IT UP IN FRONT OF THE PERSON. PLEASE READ THE INSTRUCTIONS COMPLETELY AND HAND THEM THE PIECE OF PAPER AFTERWARD. THE INTERVIEWER CAN READ THE INSTRUCTIONS ONLY ONCE. THE INTERVIEWER CAN REPEAT THE INSTRUCTIONS ONLY IF THE RESPONDENT DID NOT HEAR THE INSTRUCTIONS AT ALL. OTHERWISE YOU CANNOT REPEAT THE INSTRUCTIONS. IF THE RESPONDENT REQUESTS THE ENUMERATOR TO DO SO, SAY “SORRY, I CANNOT REPEAT. JUST DO WHAT YOU THINK I ASKED YOU TO DO”]**

Next I'm going to give you a piece of paper. When I do, I would like you to do the following: take the paper in your right/left hand, fold the paper in half with both hands, and put the paper down on your lap.

Ifuatayo nitakupa kipande cha karatasi.nikikupa, ningependa ufanye yafuatayo:chukua karatasi kwenye mkono wako wa kulia/kushoto, kunja karatasi katikati kwa mikono yote miwili, na uiweka karatasi juu ya mapaja yako.

[DO NOT READ: Did the respondent follow the instructions (mark all that apply)?]

0= None | 1= Takes paper correctly in hand | 2= Folds it in half | 3= Puts it on his/her lap | 666=Refused

20a. **[If Q17b = 1]** Now, I am going to give you a pencil and a piece of paper. Please write any complete sentence on that piece of paper.

Sasa nitakupa pensili na kipande cha karatasi. Tafadhali andika sentensi yoyote iliyokamilika kwenye kipande hicho cha karatasi.

[ENUMERATOR NOTE: HERE THE RESPONDENT CAN WRITE ANYTHING AS LONG AS YOU CAN UNDERSTAND THE MEANING AND, IN ANY LANGUAGE, HE OR SHE IS COMFORTABLE WITH. THE RESPONDENTS MAY HESITATE AND WOULD REFUSE TO DO IT. BUT YOU NEED TO ENCOURAGE THEM TO WRITE AT LEAST ONE SHORT SENTENCE. IF SENTENCE IS ILLEGIBLE, ASK "COULD YOU READ IT FOR ME? SENTENCE SHOULD HAVE A SUBJECT AND A VERB, AND MAKE SENSE. SPELLING AND GRAMMATICAL ERRORS ARE ACCEPTABLE.

[DO NOT READ]: Did the respondent write a complete sentence?

0= Incorrect response | 1= Correct response | 666=Refused

20b. **[If Q17b = 0]** Please tell us something about your house.

Tafadhali tuambie kitu kuhusu nyumba yako/yenu.

[DO NOT READ]: Did the respondent say a full sentence?

[ENUMERATOR NOTE: THE SENTENCE MUST BE A FULL SENTENCE ABOUT HIS/HER HOUSE AND MUST MAKE SENSE.]

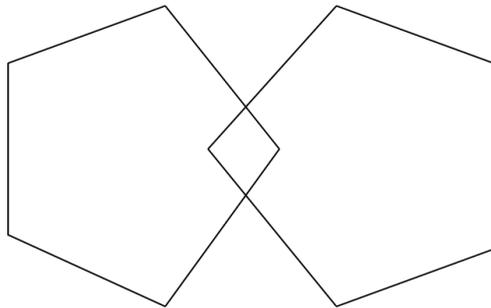
0= Incorrect response | 1= Correct response | 666=Refused

21. **[ENUMERATOR NOTE: PLACE DESIGN, ERASER AND PENCIL IN FRONT OF THE PERSON].**

Now I will show you a picture of shapes and ask you to copy the picture on the piece of paper in front of you. Please note that you have one minute to draw. *Are you ready? Let's begin*

Sasa nitakuonyesha picha la umbo na nitakuuliza unakili picha hiyo kwenye kipande cha karatasi mbele yako. Tafadhali kumbuka una dakika moja kuchora. Uko tayari? Hebu tuanze.

[ENUMERATOR NOTE: SHOW THE RESPONDENT THE PICTURE THE WHOLE TIME. THE RESPONDENT IS ALLOWED TO ERASE AND START OVER. WAIT UNTIL THE PERSON IS FINISHED AND HANDS IT BACK. SCORE ONLY FOR A CORRECTLY COPIED DIAGRAM WITH A 4-SIDED FIGURE BETWEEN TWO 5-SIDED FIGURES. GIVE ONE MINUTE. IF THE FR IS STILL WORKING AFTER 1 MINUTE, PLEASE NOTE THE FIGURE DRAWN IN 1 MINUTE]



Copy here

21a. **[DO NOT READ]** DOES THE DRAWING HAVE TWO FIVE-SIDED FIGURES THAT INTERSECT TO FORM A FOUR-SIDED FIGURE?

0= No | 1= Yes | 97=Can't be assessed

21b. **[DO NOT READ]** DOES THE DRAWING HAVE ALL ANGLES IN THE FIVE-SIDED FIGURES PRESERVED?

0=No | 1= Yes | 97=Can't be assessed

22. Did the respondent finish the drawing in one minute or less?

0=No | 1=Yes | 97=Can't be assessed

Section 6.2: 10-Word List Recall Immediate

- A. I am going to read out a list of words and ask you to repeat them back to me when I have finished. The list of words is purposely made long so that it will be difficult for anyone to recall all the words. You can repeat the words back in any order. Please listen carefully as I cannot repeat the words after I have read them to you.

Nitasoma orodha ya maneno na nitakuomba uyarudie nitakapomaliza. Orodha ya maneno imefanywa ndefu kwa umaksudi ndio iwe ngumu kwa yeyote kuyakumbuka. Unaweza kuyarudia maneno kwa mpangilio wowote. Tafadhali sikiliza kwa makini kwani sitarudia maneno baada ya kukusomea.

[ENUMERATOR NOTE: READ OUT THE TEN WORDS, PAUSING FOR ONE SECOND BETWEEN EACH. TICK THE ORDER IN WHICH THE RESPONDENT SAYS WORDS AND RECORD ANY WORDS THAT ARE NOT ON THE LIST. RECORD ON A PIECE OF PAPER AND FILL IN SURVEYCTO AFTER. Keep count of words that are not on the list and write the total number at the end. ALLOW THE RESPONDENT REPEATS AFTER EVERY WORD, BUT BE SURE THEY TRY TO REPEAT ALL 10 AT THE END. SAY "TELL ME THE 10 WORDS AGAIN".]

<u>1st</u>	<u>Order</u>
MILK-MAZIWA	
ARM-MKONO	
LETTER-BARUA	
QUEEN-MALKIA	

TICKET-TIKETI	
GRASS-NYASI	
CORNER-KONA	
STONE-JIWE	
BOOK-KITABU	
STICK-KIJITI	
NUMBER OF Other Words:	
Total Score	

Now please tell me all the words you can remember in any order.

Sasa tafadhali niambie maneno yote unayoweza kukumbuka kwa mpangilio wowote.

1. {RECORD CALCULATE NUMBER OF WORDS RECALLED CORRECTLY IN THE RIGHT ORDER INTO THE TABLET.}
2. {RECORD THE NUMBER OF WORDS NOT MENTIONED INTO THE TABLET}
3. {RECORD NUMBER OF OTHER WORDS NOT ON THE LIST}

4a. [DO NOT READ] DID THE RESPONDENT SAY ANY OF THE FOLLOWING WORDS (SELECT ALL THAT APPLY)

- a. CAR
- b. HOUSE
- c. FISH

B. Thank you. Now I will read out the words to you one more time. Again, please listen carefully, as I will ask you to repeat the words when I have finished.

Asante. Sasa nitarudia kuyasoma maneno hayo mara moja zaidi. Tena, tafadhali sikiza kwa makini, kwa sababu nitakuuliza uyarudie maneno hayo nitakapomaliza.

[ENUMERATOR NOTE: READ OUT THE TEN WORDS, PAUSING FOR ONE SECOND BETWEEN EACH.]

2nd	Order
GRASS-NYASI	
TICKET-TIKETI	
STICK-KIJITI	
BOOK-KITABU	
MILK-MAZIWA	
CORNER-KONA	
ARM-MKONO	
STONE-JIWE	
QUEEN-MALKIA	
LETTER-BARUA	
NUMBER OF OTHER WORDS:	
Other Words:	
Total Score	

Now please tell me all the words you can remember

Sasa tafadhali niambie maneno yote unayoweza kukumbuka

4. {RECORD THE NUMBER OF WORDS RECALLED CORRECTLY IN THE RIGHT ORDER INTO THE TABLET.}

- 5. {RECORD THE NUMBER OF WORDS NOT MENTIONED INTO THE TABLET
- 6. {RECORD NUMBER OF OTHER WORDS NOT ON THE LIST}

- 8a. [DO NOT READ] DID THE RESPONDENT SAY ANY OF THE FOLLOWING WORDS (SELECT ALL THAT APPLY)
- d. CAR
 - e. HOUSE
 - f. FISH

{CALCULATE NUMBER OF WORDS RECALLED CORRECTLY.}

- [DO NOT READ] DID THE RESPONDENT SAY ANY OF THE FOLLOWING WORDS (SELECT ALL THAT APPLY)
- g. CAR
 - h. HOUSE
 - i. FISH

C. Thank you. Now I will read out the words to you one last time. Again, please listen carefully, as I will ask you to repeat the words when I have finished.

Asante. Sasa nitakusomea maneno haya kwa mara ya mwisho. Tena, tafadhali sikiliza kwa makini, kwani nitakuuliza urudie maneno hayo nikimaliza kusoma.

[ENUMERATOR NOTE: READ OUT THE TEN WORDS, PAUSING FOR ONE SECOND BETWEEN EACH.]

3rd	Order
LETTER-BARUA	
GRASS-NYASI	
ARM-MKONO	
STONE-JIWE	

CORNER- KONA	
QUEEN- MALKIA	
MILK- MAZIWA	
BOOK- KITABU	
STICK- KIJITI	
TICKET- TIKETI	
NUMBER OF OTHER WORDS:	
Other Words	
Total Score	

Now please tell me all the words you can remember.

[Sasa tafadhali niambie maneno yote unayoweza kukumbuka.](#)

7. {RECORD THE NUMBER OF WORDS RECALLED CORRECTLY IN THE RIGHT ORDER INTO THE TABLET.}
8. {RECORD THE NUMBER OF WORDS NOT MENTIONED INTO THE TABLET}
9. {RECORD NUMBER OF OTHER WORDS NOT ON THE LIST}

12a. [DO NOT READ] DID THE RESPONDENT SAY ANY OF THE FOLLOWING WORDS (SELECT ALL THAT APPLY)

- j. CAR
- k. HOUSE
- l. FISH

{CALCULATE NUMBER OF WORDS RECALLED CORRECTLY.}

[DO NOT READ] DID THE RESPONDENT SAY ANY OF THE FOLLOWING WORDS (SELECT ALL THAT APPLY)

- m. CAR
- n. HOUSE
- o. FISH

13. **[Do not read out loud]** INDICATE WHETHER ANY OF THE FOLLOWING APPLY TO THE ADMINISTRATION OF THE WORD LISTS

1 = AN INTERRUPTION OCCURRED DURING ADMINISTRATION OF LIST 1

2 = AN INTERRUPTION OCCURRED DURING ADMINISTRATION OF LIST 2

3 = AN INTERRUPTION OCCURRED DURING ADMINISTRATION OF LIST 3

4 = RESPONDENT HAD DIFFICULTY HEARING THE WORDS

0= NO ISSUES OCCURRED

Section 6.3: Animal Naming

Now we are going to do something a little different. I am going to give you a category, and I want you to name, as fast as you can, all of the things that belong in that category. For example, if I say 'articles of clothing' you could say shirt, tie or hat. Can you please name other articles of clothing?

Sasa tutafanya kitu tofauti kidogo, nitakupa kitengo, na nitataka utaje jina, haraka uwezavyo, vitu vyote vilivyo katika kitengo hicho. Kwa mfano, nikisema 'aina za mavazi' unaweza kusema shati, tai au kofia. Je, Unaweza kutaja aina zingine za mavazi?

[ENUMERATOR NOTE: WAIT FOR THE SUBJECT TO GIVE TWO WORDS. IF THE SUBJECT SUCCEEDS, INDICATE THAT THE RESPONSES WERE CORRECT AND PROCEED TO THE TEST ITSELF. IF THE SUBJECT GIVES AN INAPPROPRIATE WORD OR REPLY, CORRECT THE RESPONSE AND REPEAT THE INSTRUCTIONS. IF IT BECOMES CLEAR THAT THE SUBJECT STILL DOES NOT UNDERSTAND THE INSTRUCTION, TERMINATE THIS TASK AND EXPLAIN WHY THIS IS SO. AFTER YOU

ARE SATISFIED THAT THE SUBJECT UNDERSTANDS THE TASK, AND HAS GIVEN TWO WORDS NAMING ARTICLES OF CLOTHING, PROCEED]

That's fine. I want you to name things that belong to another category, 'animals'. I want you to think about all the many different kinds of animals you know. Think of any kinds of animals in the air, on land, in the water, in the forest, all the different animals. Now I would like you to tell me the names of as many animals as you can. You will only have one minute to do this. I repeat, you only have one minute to say as many animals as you can. Are you ready? Let's begin.

Hiyo ni sawa. Nataka utaje vitu ambavyo ni vya kitengo kingine, 'wanyama'. Nataka ufikirie kuhusu aina nyingi za wanyama unaowajua. Fikiria aina yoyote ya wanyama wa angani, wa ardhini, wa majini, wa msituni, wanyama wote tofauti. Sasa ningependa uniambie majina ya wanyama wengi tofauti kadri uwezavyo. Utakuwa na dakika moja ya kufanya hivyo. Narudia, utakuwa na dakika moja kutaja wanyama wengi uwezavyo. uko tayari? Hebu tuanze.

[ENUMERATOR NOTE: BEGIN TIMER. ALLOW ONE MINUTE PRECISELY. IF THE SUBJECT STOPS BEFORE THE END OF THE TIME, ENCOURAGE THEM TO TRY TO FIND MORE WORDS. IF THEY ARE SILENT FOR 15 SECONDS REPEAT THE BASIC INSTRUCTION

- ('I WANT YOU TO TELL ME ALL THE ANIMALS YOU CAN THINK OF').
- ('NATAKA UNIAMBIE WANYAMA WOTE AMBAO UNaweza KUFIKIRIA').

NO EXTENSION ON THE TIME LIMIT IS MADE IN THE EVENT THAT THE INSTRUCTION HAS TO BE REPEATED.]

1. **[DO NOT READ]:** Was there any animals chart within the survey administration environment and the FR was referring to it during this exercise?

2. **[DO NOT READ]:** ENTER THE NUMBER OF TOTAL ANIMAL NAMED

[ENUMERATOR NOTE: ANY MEMBER OF THE ANIMAL KINGDOM, REAL OR MYTHICAL IS SCORED CORRECT, EXCEPT REPETITIONS AND PROPER NOUNS. SPECIFICALLY, EACH OF THE FOLLOWING GETS CREDIT: A SPECIES NAME AND ANY 9 ACCOMPANYING BREEDS WITHIN THE SPECIES; MALE, FEMALE AND INFANT NAMES WITHIN THE SPECIES. If you are not sure whether something is an animal, count it as correct. PLEASE NOTE THAT BIRDS AND FISH COUNT AS CORRECT.

3. **[DO NOT READ]:** ENTER THE NUMBER OF INCORRECT ANIMALS NAMED
4. **[DO NOT READ]:** ENTER THE NUMBER OF REPETITIONS
5. **[DO NOT READ]:** DID ANY ISSUES OCCUR DURING THE ADMINISTRATION OF THIS TASK?

- a. 0=No issues | 1=Interruption during the response period | 2= Problem with timing | 3= Respondent did not understand the task | 4=Another issue occurred | 666=Refused

Section 6.4 Object Naming

Read: Next I will ask you to name some objects for me.

Ifuatayo nitakuuliza unitajie baadhi ya vitu.

1.What do people usually use to cut paper?

Kwa kawaida watu hutumia nini kukata karatasi?

0= Incorrect | 1= Correct | 999= *Don't Know* | 666=*Refused*

[ENUMERATOR NOTE: CORRECT ANSWER IS SCISSORS/MAKASI, KNIFE/KISU, OR OTHER OBJECT THAT IS USED TO CUT PAPER.]

2. What is the object that has a thick green smooth cover that is red and watery inside and contains seeds?

Je, ni kitu gani ambacho kina ngozi mzito ya kijani kibichi (green) laini, ambacho ni nyekundu (red) na majimaji ndani na kina mbegu?

0= Incorrect | 1=Correct | 999= *Don't Know* | 666=*Refused*

[ENUMERATOR NOTE: ALLOW THE FR TO SAY IT IN ENGLISH AND ANY LOCAL LANGUAGE THEY KNOW. CORRECT ANSWER IS WATERMELON/TIKITIMAJI]

5. Who is the current president of Kenya?

Raisi wa sasa wa kenya ni nani?

0= Incorrect | 1= Correct | 999= *Don't Know* | 666=*Refused*

[ENUMERATOR NOTE: CORRECT ANSWER IS WILLIAM SAMOE RUTO IT DOESN'T HAVE TO BE A FULL NAME.]

[DO NOT READ ALOUD]: Were there fruits/object charts in the survey environment which the respondent made reference to during this exercise

Section 6.5: Symbol Cancellation Task

Now I will ask you to do a task that involves you to find symbols on this sheet of paper.

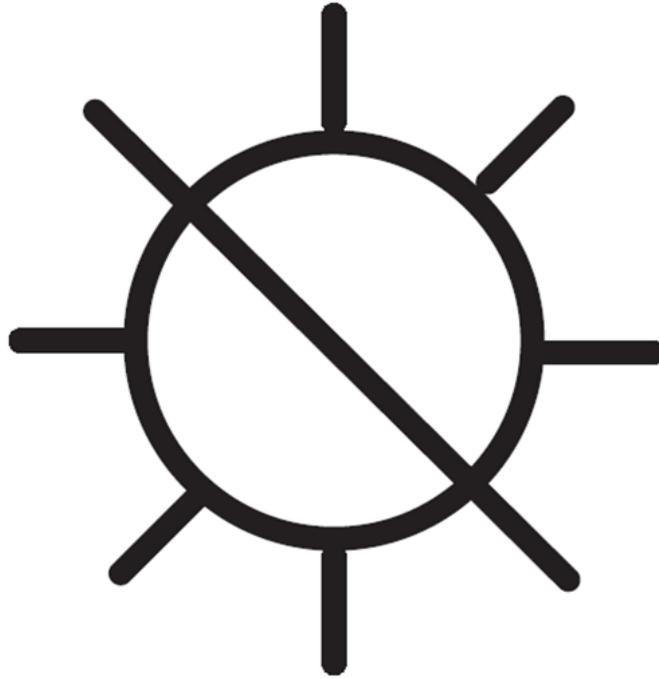
Sasa nitakuuliza ufanye jaribio inayokuhusisha kutafuta alama kwenye karatasi hii.

[ENUMERATOR NOTE: PLACE THE SHEET OF PAPER DIRECTLY IN FRONT OF THE RESPONDENT]

This sheet shows different symbols. I will now show you a symbol which is one of the symbols on the piece of paper.

Karatasi hii inaonyesha alama tofauti. Sasa nitakuonyesha ishara ambayo ni moja ya alama kwenye kipande cha karatasi.

[Enumerator Note: SHOW THE TABLET SCREEN WITH A STAR SYMBOL.]



Please find the figures that look like this one on the next page. Find as many as you can and draw a circle around each figure, like I am doing it.

Tafadhali tafuta alama zinazofanana na hii kwenye ukurasa unaofuata. Tafuta nyingi uwezavyo na uchore duara kuzunguka kila alama, jinsi ninavyofanya.

[ENUMERATOR NOTE: CIRCLE AN EXAMPLE ON THE MIDDLE OF THE PAGE.]

Circle only figures that are exactly like this one. Please start from the top of the page from left, line by line. Work as fast as you can until I tell you to stop. I repeat work as fast as you can until the timer stops and I say stop.

Zungusha tu alama zinazo fanana na hii. Tafadhali anzia juu ya ukurasa, kuanzia kushoto, msatari kwa mstari. Fanya haraka uwezavyo mpaka nitakapo kuambia uwache. Narudia fanya haraka uwezavyo mpaka kipima saa kisimame na niseme wacha.

Now I will ask you to scan through the piece of paper. Every time you see the symbol that I just showed you, please circle it. Please look for as many as you can within one minute. I repeat, you only have one minute to complete this task.

Sasa nitakuuliza upitie kipande hiki cha karatasi. Kila wakati unapooni alama ambayo nimekuonyesha, tafadhali izingire. Tafadhali tafuta nyingi uwezavyo kwa dakika moja. Narudia, Una tu dakika moja kukamilisha kazi hii.

[Enumerator Note]: Count how many Symbols the respondent circled in 1 minute. Start the timer as soon as the respondent is ready. While you are counting symbols circled per second, do not rush them; they should circle at the pace they are most comfortable with.

[ENUMERATOR NOTE: BEGIN TIMER FOR 60 SECONDS. KEEP IN MIND THAT THE RESPONDENT HAS TO GO FROM LEFT TO RIGHT, LINE BY LINE. DON'T ALLOW TO MARK AT RANDOM. IF THE RESPONDENT BEGINS CIRCLING SYMBOLS RANDOMLY, STOP HIM/HER AND SAY:

- "Remember it is important to go line by line, please continue."
- "Kumbuka ni muhimu kwenda mstari kwa mstari, tafadhali endelea."

DO NOT STOP TIMING.

1. [DO NOT READ]: DID ANY ISSUES OCCUR DURING THE ADMINISTRATION OF THIS TASK?

0=No issues | 1=Interruption during the response period | 2= Problem with timing | 3= Respondent did not understand the task | 4=Another issue occurred | 666=Refused| 97=Can't be assessed

2. [DO NOT READ]: RECORD THE NUMBER OF CORRECT SYMBOLS(USE 97 FOR CAN'T BE ASSESSED)

3. [DO NOT READ]: RECORD THE NUMBER OF INCORRECT SYMBOLS (USE 97 FOR CAN'T BE ASSESSED)

Please take the photo of the image.

Please take the photo

Section 6.6: Community Screening Instrument for Dementia (CSI-D; 4 items)

1. **[DO NOT READ]** IS THERE A WINDOW AND A DOOR IN THE LOCATION WHERE THE INTERVIEW IS TAKING PLACE?
1= Yes | 2= No
2. **[DO NOT READ]** IS THE INTERVIEW BEING CONDUCTED INSIDE OR OUTSIDE?
1 = Inside | 2 = Outside

Now I will point to something and I would like you to tell me the name of the object.
Sasa nitaelekeza mkono kwenye kitu na ningependa uniambie jina la kitu hicho.

3. **[INTERVIEWER POINTS TO THEIR ELBOW]** What do we call this?
Tunaitaje hii?
0= Incorrect | 1= Correct | 999= Don't Know | 666=Refused

[ENUMERATOR NOTE: ALLOW THE FR TO SAY IT IN ENGLISH AND ANY LOCAL LANGUAGE THEY KNOW. CORRECT ANSWER IS ELBOW-ENGLISH/KUMBO-SWAHILI/KIWIKO/OKUMBO-LUO/EKHUMBO-BUKUSU/ESIKOKHOLO-SAMIA/ESIKHUMBO-NYALA/ESIDONG'OROT-TESO]

If incorrect:[Do not Read] Please write what the respondent said

- 3b. **[INTERVIEWER POINTS TO THEIR NECK]** What do we call this?
3b. **[INTERVIEWER POINTS TO THEIR NECK]**Tunaitaje hii?
0= Incorrect | 1= Correct | 999= Don't Know | 666=Refused

[ENUMERATOR NOTE: ALLOW THE FR TO SAY IT IN ENGLISH AND ANY LOCAL LANGUAGE THEY KNOW. CORRECT ANSWER IS NECK-ENGLISH/SHINGO-SWAHILI/NG'UT-LUO/LIKOSI-NYALA/LING'ORI-IDAKHO/IRING'OTI-MARAGOLI]

If incorrect:[Do not Read] Please write what the respondent said.

Now I will tell you the name of something and I want you to describe what it is used for.
Sasa nitakuambia jina la kitu na nataka ueleze inatumika kufanya nini.

4. What do you do with a hammer?

Unatumia nyundo kufanya nini?

0= Incorrect | 1= Correct | 999= Don't Know | 666=Refused

[ENUMERATOR NOTE: CORRECT ANSWER INCLUDES DRIVING A NAIL INTO SOMETHING/KUGONGA MISUMARI, ETC.]

5. Now, can you tell me where the nearest market is located near your house?

Sasa, unaweza kuniambia soko la karibu la mtaani liko wapi karibu na nyumba yako?

[ENUMERATOR NOTE: CORRECT ANSWERS INCLUDE: CLEAR DIRECTION ON HOW TO GET TO THE MARKET/STORE FROM THE HOUSE/OFFICE OR A NEARBY LANDMARK. IF THE FIRST ANSWER IS VAGUE, PROBE FOR A MORE SPECIFIC ANSWER.]

0= Incorrect | 1= Correct | 999= Don't Know | 666=Refused

6a. **[If Q1=1]** Can you point first to a window and then at a door?

Je, unaweza kuelekeza(point) mkono kwanza kwenye dirisha na kisha kwenye mlango?

[ENUMERATOR NOTE: ONLY SCORE CORRECT IF THE RESPONDENT FIRST POINTED TO A WINDOW AND THEN A DOOR. MARK AS INCORRECT IF THEY POINTED IN THE WRONG ORDER.]

0= Incorrect | 1= Correct | 999= Don't Know | 666=Refused

6b. **[If Q2=2]** Can you point first to the ceiling and then at the door?

Je, unaweza kuelekeza(point) mkono kwanza kwenye dari ya nyumba (ceiling) kisha mlangoni?

[ENUMERATOR NOTE: ONLY SCORE CORRECT IF THE RESPONDENT FIRST POINTED TO THE CEILING AND THEN THE DOOR. MARK AS INCORRECT IF THEY POINTED IN THE WRONG ORDER.]

0= Incorrect | 1= Correct | 999= Don't Know | 666=Refused

6c. Can you first point to the sky and then to the floor?

Je, unaweza kuelekeza(point) mkono angani kisha mlangoni?

[ENUMERATOR NOTE: ONLY SCORE CORRECT IF THE RESPONDENT FIRST POINTED TO THE SKY AND THEN THE FLOOR. MARK AS INCORRECT IF THEY POINTED IN THE WRONG ORDER.]

0= Incorrect | 1=Correct | 999= *Don't Know* | 666=*Refused*

Section 6.8: Raven's Tests

And now for this short test I will give you a piece of paper with a pattern with a piece missing. Below are six pieces, choose the one that completes the pattern.

[ENUMERATOR NOTE: ALLOW THE RESPONDENT UP TO 30 SECONDS TO SELECT THE SHAPE THAT COMPLETES THE PATTERN. SAY "THANK YOU, LET'S MOVE ONTO THE NEXT ONE"]

Na sasa kwa jaribio hili fupi nitakupa kipande cha karatasi na muundo wa kipande kinachokosekana. Chini ni vipande sita, chagua moja ambayo inakamilisha muundo.

Section 6.9: Forward and Backward Digit Span

Read: I will now read you a list of digits. Please repeat them to me in the order that you hear them.

Sasa nitakusomea orodha ya nambari. Sikiliza Kwa makini na tafadhali urudie kwa mpangilio utakavyoisikia.

Enumerator Note: READ LIST OF DIGITS 1 DIGIT PER SECOND.

2...1...8...5...4

1. **[Do not read out loud]** Did the respondent repeat all 5 digits correctly in the forward order?

1=Yes

2=No

Read: I will again read you a list of digits. Please repeat them to me in the backward order that you hear them. "For example, if I said 8-5 you would say 5-8". Are you ready? Let's begin.

[**Enumerator Note:** If the respondent does not respond, repeat the example.]

Nitasoma orodha ya nambari tena. Tafadhali uzirudie nambari hizo Kwa mpangilio ya kurudi nyuma. Kwa mfano, ikiwa nimesema 8-5 unafaa kusema 5-8.

ARE YOU READY? LET'S BEGIN

UKO TAYARI? TUANZE

Enumerator Note: READ LIST OF DIGITS 1 DIGIT PER SECOND. SELF CORRECTION IS ALLOWED.

7...4...2

If the FR doesn't immediately repeat the words after you, tell them "**PLEASE BEGIN**"

2. [**Do not read out loud**] Did the respondent repeat all 3 digits correctly in the backward order (2,4,7)?

1=Yes

2=No

Section 6.10: Similarities and Differences: Judgment and Problem Solving

Now I will ask you to identify similarities between different things. Let's start with an example.

Sasa nitakuuliza utambue kufanana kati ya vitu tofauti. Hebu tuanze kwa mfano.

Example: Pencils and Pens are alike because both are _____ [correct answer: writing instruments]

Penseli na Kalamu ni sawa kwa sababu zote ni _____ [correct answer: Vyombo vya kuandikia]

[**ENUMERATOR NOTE:** PLEASE EXPLAIN TO THE FR WHY WRITING INSTRUMENTS IS THE ANSWER.]

1. Elephants and monkeys are alike because both are _____
Tembo/Ndovu na nyani ni sawa kwa sababu wote ni _____
[ENUMERATOR NOTE: CORRECT ANSWER IS MAMMALS/MAMALIA OR ANIMALS/WANYAMA.]
1= Correct | 0=Incorrect | 777 = Don't know/doesn't understand | 666 = Refused
2. Kale and spinach are alike because both are _____
Sukuma wiki na mchicha (spinach) ni sawa kwa sababu zote ni?
[ENUMERATOR NOTE: CORRECT ANSWER IS VEGETABLES/MBOGA]
1= Correct | 0=Incorrect | 777 = Don't know/doesn't understand | 666 = Refused

Now I will ask you to identify differences between two different things.

Sasa nitakuuliza utambue tofauti kati ya vitu viwili tofauti.

Example: Dogs and doves are different because one is a mammal and the other is a _____ [correct answer: bird/ndege]

Example: Mbwa na njiwa ni tofauti kwa sababu mmoja ni mamalia na mwingine ni?

[correct answer: bird/ndege]

[ENUMERATOR NOTE: PLEASE EXPLAIN TO THE FR WHY BIRD/NDEGE IS THE ANSWER.]

3. A lie and a mistake are different because one is done intentionally and the other is _____
Uongo na kosa ni tofauti kwa sababu moja hufanywa kwa kimakusudi na nyingine _____
[ENUMERATOR NOTE: CORRECT ANSWER IS AN ACCIDENT]
1= Correct | 0=Incorrect | 777 = Don't know/doesn't understand | 666 = Refused
4. A river and a pond are different because one has moving water and the other has _____
Mto na bwawa ni tofauti kwa sababu moja ina maji yanayosonga na nyingine ina _____
[ENUMERATOR NOTE: CORRECT ANSWER IS STANDING WATER]
1= Correct | 0=Incorrect | 777 = Don't know/doesn't understand | 666 = Refused

Section 6.11: Making Change

I will now ask you a question about making change from a 1,000 Ksh note. How many 200 Ksh notes will be given for one 1,000 Ksh note?

Sasa nitakuuliza swali kuhusu kupata change kutoka noti ya kshs 1000. Ni noti ngapi za shilingi 200 zitatolewa kwa noti moja ya kshs 1000.

[ENUMERATOR NOTE: CORRECT ANSWER IS 5 (TANO).]

1= Correct | 0= Incorrect | 777 = Don't know/doesn't understand | 666 = Refused

Section 6.12: Clock Drawing

Now I will ask you to draw a clock for me using this pencil and paper. Please start with a circle. Then draw the numbers on the face of the clock. Finally, draw the hands to show 10 minutes after 11. Please ensure to draw the clock using the English time as it would appear in the real clock.

[ENUMERATOR NOTE: PLEASE ALLOW THE FR UP TO 2 MINUTES TO DRAW THE CLOCK.]

Sasa nitakuuliza unichoree saa ya ukuta kwa kutumia penseli na karatasi hii.

Tafadhali anza na duara (circle). Kisha chora nambari kwenye uso wa saa. Hatimaye, chora mikono ya saa kuonyesha saa tano na dakika kumi. Tafadhali hakikisha kuwa umechora saa kwa kutumia saa ya Kiingereza ukizingatia vyenye ingeonekana kwenye saa halisi

[ENUMERATOR NOTE: FIRST READ THE INSTRUCTIONS AND THEN HAND THE PAPER AND PEN TO THE RESPONDENT.]

ARE YOU READY?

UKO TAYARI?

ENUMERATOR NOTE: Once the FR says they are ready begin the timer at once. PLEASE ALLOW THE FR UPTO 2 MINUTES TO DRAW THE CLOCK.

1. **[DO NOT READ]** Is there a clock within the survey environment and the FR made reference to it during clock drawing?
1=Yes | 0=No | 999=Don't know | 666=Refused| 97=Can't be assessed
2. **[DO NOT READ]** Does the FR have a watch during the survey and made reference to it during clock drawing task?
1=Yes | 0=No | 999=Don't know | 666=Refused| 97=Can't be assessed
3. **[DO NOT READ]** IS THERE A CLOSED CIRCLE?
1=Yes | 0=No | 999=Don't know | 666=Refused| 97=Can't be assessed
4. **[DO NOT READ]** ARE THE NUMBERS CORRECTLY PLACED AND ORDERED?
1=Yes | 0=No | 999=Don't know | 666=Refused| 97=Can't be assessed
5. **[DO NOT READ]** ARE THERE TWO CLOCK HANDS?
1=Yes | 0=No | 999=Don't know | 666=Refused| 97=Can't be assessed
6. **[DO NOT READ]** ARE THE TWO CLOCK HANDS CORRECTLY SHOWING 10 MINUTES AFTER 11?
1=Yes | 0=No | 999=Don't know | 666=Refused| 97=Can't be assessed

{Clock Drawing Score = S4.13.3 + S4.13.4 + S4.13.5}

Please take the photo of the clock

Section 6.13: 10-Word List Recall: Delayed

Do you remember that I read out to you a long list of words? How many of those words do you remember now? Could you please tell me all the words you can remember.

Je, unakumbuka kwamba nilikusomea orodha ndefu ya maneno? unakumbuka maneno mangapi kati ya hayo sasa. Tafadhali unaweza kuniambia maneno yote unayoweza kukumbuka?

[ENUMERATOR NOTE: MARK THE ORDER IN WHICH THE WORD IS RECALLED. RECORD ALL WORDS THE RESPONDENT SAYS THAT ARE NOT IN THE LIST.]

<u>Words</u>	<u>Order</u>
MILK-MAZIWA	
ARM-MKONO	
LETTER-BARUA	
QUEEN-MALKIA	
TICKET-TIKETI	
GRASS-NYASI	
CORNER-KONA	
STONE-JIWE	
BOOK-KITABU	
STICK-KIJITI	
NUMBER OF OTHER WORDS:	
Other Words:	
TOTAL SCORE	

{CALCULATE NUMBER OF WORDS RECALLED CORRECTLY.}

1. DO NOT READ: DID THE RESPONDENT RECALL ANY WORDS?

1= Yes

2= No -> GO TO Q13

2. {RECORD THE NUMBER OF WORDS RECALLED CORRECTLY IN THE RIGHT ORDER INTO THE TABLET.}
3. {RECORD THE NUMBER OF WORDS NOT MENTIONED INTO THE TABLET}
4. {RECORD NUMBER OF OTHER WORDS NOT ON THE LIST}

4a. [DO NOT READ] DID THE RESPONDENT SAY ANY OF THE FOLLOWING WORDS (SELECT ALL THAT APPLY)

- p. CAR
- q. HOUSE
- r. FISH

Section 6.14: Word List Recognition

Now I am going to read you a set of words out loud. Some of the words are from the list you heard earlier and some are words I haven't told you before. I want you to tell me which words are from the list you heard earlier. Please answer yes or no for each word with yes meaning they were on the list, and no meaning they were not on the list. Are you ready? Let's begin.

Sasa nitakusomea mpangilio wa maneno. Baadhi ya maneno ni kutoka kwenye orodha niliyokusomea hapo awali na mengine ni maneno ambayo sijakusomea hapo awali. Nataka uniambie ni maneno gani kutoka kwenye orodha hii uliyoyasikia hapo awali. Tafadhali jibu ndiyo au hapana kwa kila neno, ndiyo kumaanisha lilikuwa kwenye orodha, na hapana kumanisha halikuwa kwenye orodha. Uko tayari? Hebu tuanze.

Word	0 = No 1 = Yes 777 = Don't know 666 = Refused
Temple Hekalu	
Tea Chai	
Milk Maziwa	
Key Ufunguo	

Arm Mkono	
Corner Kona	
Five Tano	
Letter Barua	
Hotel Hoteli	
Mountain Mlima	
Queen Malkia	
Book Kitabu	
Slipper Slipas	
Stick Kijiti	
Village Kijiji	
String Kamba	
Ticket Tiketi	
Troops Wanajeshi	
Grass Nyasi	
Stone Jiwe	

Section 6.15: Story Recall Immediate #1

Now I will tell a short story, then I will ask you to repeat as much of the story as you can remember as you would remember the words of a song. I want you to listen very carefully because I want you to try to tell me the whole story with as many details as you can remember. Are you ready? Let's begin.

Sasa nitasimulia hadithi fupi, kisha nitakuomba urudie hadithi hiyo kadri unavyoweza kukumbuka kama vile ungekumbuka maneno ya wimbo. Nataka usikilize kwa makini sana kwa sababu nataka ujaribu kuniambia hadithi nzima na maelezo mengi unavyoweza kukumbuka. Uko tayari? Hebu tuanze.

"Three children were alone at home and the house caught on fire. A brave man managed to climb in a back window and carry them to safety. Aside from minor cuts and bruises, all were well."

Now I would like you to tell me the story in as much detail as possible.

"Watoto watatu walikuwa peke yao nyumbani na nyumba hiyo ikashika moto. Mwanaume jasiri aliweza kupanda kwenye dirisha la nyuma na kuwapeleka mahali salama. Kando na mikato midogo na majeraha, wote walikuwa sawa."

Sasa ningependa uniambie hadithi hiyo kwa maneno mengi unavyoweza kukumbuka

[ENUMERATOR NOTE: RESPONDENTS NEED TO RECALL THE UNDERLINED STORY POINTS EXACTLY WORD FOR WORD. IF THEY RECALL AN APPROXIMATE ANSWER THEN MARK "APPROXIMATE ANSWER". AN EXAMPLE FOR AN APPROXIMATE ANSWER FOR "3 CHILDREN" COULD INCLUDE "SOME CHILDREN" OR "3 PEOPLE" OR "4 CHILDREN." IF THEY SAY "4 MEN" THAT IS NOT CORRECT.]

Story Recall	0=Not correct, not mentioned 1=Approximate answer 2=Exact Answer
<u>3 children</u>	
<u>alone at home</u>	
<u>house</u> caught on <u>fire</u>	
<u>brave man</u>	

<u>climbed</u>	
back <u>window</u>	
<u>carry</u> them to <u>safety</u>	
<u>minor cuts</u>	
<u>bruises</u>	
all were <u>well</u>	

Story Recall	0=Not correct, not mentioned 1=Approximate answer 2=Exact Answer
Watoto watatu	
peke yao nyumbani	
nyumba hiyo ikashika moto	
mwanaume jasiri	
kupanda	
dirisha la nyuma	
kuwapeleka mahali salama	
mikato midogo	
majeraha	

wote walikuwa sawa	
------------------------------------	--

{IMMEDIATE RECALL STORY #1 SCORE= Record the number of exact story points the respondent was able to recall when retelling a story immediately after it was read aloud to him/her. Scores range from 0-6.}

{IMMEDIATE RECALL STORY #1 SCORE= Record the total score of exact story points and approximate answers. Scores range from 0-12. }

Very good, now try to remember this story because I will ask you about it later.

[Vizuri sana, sasa jaribu kukumbuka hii hadithi kwa sababu nitakuuliza kuihusu baadaye.](#)

Section 6.16: Story Recall Immediate #2

Now I will tell another short story, then I will ask you to repeat as much of the story as you can remember as you would remember the words of a song. I want you to listen very carefully because I want you to try to tell me the whole story with as many details as you can remember. Are you ready? Let's begin.

[Sasa nitasimulia hadithi nyingine fupi, kisha nitakuomba urudie hadithi hiyo kadri unavyoweza kukumbuka kama vile ungekumbuka maneno ya wimbo. Nataka usikize kwa makini sana kwa sababu nataka ujaribu kuniambia hadithi nzima na maelezo mengi unavyoweza kukumbuka. Uko tayari? Hebu tuanze.](#)

“Anne Wanyonyi from East Nairobi, employed as a cook in a school kitchen, reported at the police station that she had been held up on the main street the night before and robbed of 200 Shillings. She had four small children, the rent was due, and they had not eaten for two days. The police, touched by the woman's story, took up a collection for her.”

[“Anne Wanyonyi kutoka Nairobi mashariki, aliajiriwa kama mpishi katika jikoni la shule, aliripoti katika kituo cha polisi kwamba alikuwa amezuliwa kwenye barabara kuu usiku uliopita na kuibiwa shilingi 200. Alikuwa na Watoto wanne wadogo, kodi ilikuaimetimia na walikuwa hawajakula kwa siku mbili. Polisi waliguswa na hadithi ya huyo mwanamke na kumfanyia mchango mwanamke huyo.”](#)

Now I would like you tell me the story in as much detail as possible.

Sasa ningependa uniambie hadithi hiyo kwa maneno mengi unavyoweza kukumbuka.

[ENUMERATOR NOTE: RESPONDENTS NEED TO RECALL THE UNDERLINED STORY POINTS EXACTLY WORD FOR WORD. IF THEY RECALL AN APPROXIMATE ANSWER THEN MARK “APPROXIMATE ANSWER”. AN EXAMPLE FOR AN APPROXIMATE ANSWER FOR “EMPLOYED” COULD BE “WORKED” OR “EMPLOYEE”.]

Story Recall	0=Not correct, not mentioned 1=Approximate answer 2=Exact Answer
<u>Anne</u>	
<u>Wanyonyi</u>	
From <u>East</u>	
<u>Nairobi</u>	
<u>Employed</u>	
as a <u>cook</u>	
in a <u>school</u>	
<u>kitchen</u>	
<u>reported</u>	
at the <u>police</u>	
<u>station</u>	
that she had been <u>held up</u>	

on <u>Main street</u>	
the <u>night before</u>	
and <u>robbed</u>	
of <u>200 shillings</u>	
She had <u>four</u>	
<u>small children</u>	
the <u>rent was due</u>	
and they had <u>not eaten</u>	
for <u>two days</u>	
The <u>police.</u>	
<u>touched</u> by the woman's story	
<u>took up a collection</u>	
for <u>her.</u>	

Swahili version

Story Recall	0=Not correct, not mentioned 1=Approximate answer 2=Exact Answer
<u>Anne</u>	
<u>Wanyonyi</u>	

kutoka <u>mashariki</u>	
<u>Nairobi</u>	
<u>aliajiriwa</u>	
kama <u>mpishi</u>	
katika <u>shule</u>	
<u>jikoni</u>	
<u>aliripoti</u>	
kwa <u>polisi</u>	
<u>kituo</u>	
kwamba alikuwa <u>amezuiliwa</u>	
kwenye <u>barabara kuu</u>	
<u>usiku uliopita</u>	
na <u>kuibiwa</u>	
<u>shillingi 200</u>	
Alikuwa na <u>wanne</u>	
<u>watoto wadogo</u>	
<u>kodi ilitimia</u>	
walikuwa <u>hawajakula</u>	

kwa <u>siku mbili</u>	
<u>Polisi</u>	
<u>waliguswa</u> na hadithi ya huyo mwanamke	
<u>walifanya mchango</u>	
kwa huyo <u>mwanamke</u>	

{IMMEDIATE RECALL STORY #2 SCORE= Record the number of exact story points the respondent was able to recall when retelling a story immediately after it was read aloud to him/her. Scores range from 0-25.}

{IMMEDIATE RECALL STORY #2 SCORE= Record the total score of exact story points and approximate answers. Exact answer is counted as 1 and approximate answer is counted as 0.5. Scores range from 0-25. }

Vizuri sana, sasa jaribu kukumbuka hii hadithi kwa sababu nitakuuliza kuihusu baadaye.

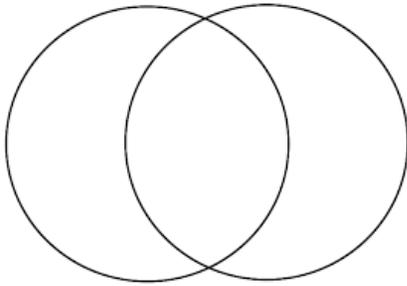
Section 6.17: Constructional Praxis Immediate

Now I would like you to take my pencil and copy these shapes in the space given next to them on the sheet.

Sasa ningependa uchukue penseli yangu na unakili maumbo haya katika nafasi iliyotolewa chini yao kwenye karatasi.

1. Draw two circles intersecting.

Chora miduara (circle) miwili inayoingiliana."



Here are two circles I would like you to draw. Copy it just next to it.

Hapa kuna miduara(circles) miwili ningependa uchore. Nakili karibu nayo

DO NOT READ: Point to the overlapping circles

Start the timer to keep track of how long the FR is taking. This is not a timed task but FRs are expected to finish in less than 2 minutes. If it takes more than 2 minutes say **"Thank you, lets move on to the next shape"**. If the respondent insists, then allow them to keep going. If the respondent asks if it is a timed test, say **"You have about two minutes"**. If they ask how much time is left before two minutes have passed, say **"You still have time, please continue"**

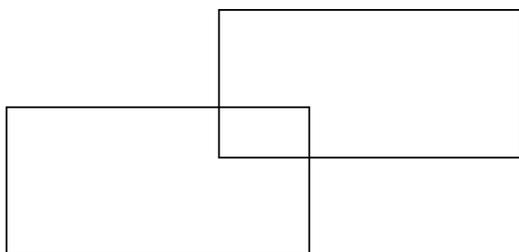
DO NOT READ: Score two circles intersecting

[ENUMERATOR NOTE: IF THE RESPONDENT DREW A CIRCULAR SHAPE AND DREW A CLOSED CIRCLE (WITHIN 1/8"), 2 IS CODED. IF THE RESPONDENT DREW A CIRCULAR SHAPE BUT DID NOT DRAW A CLOSED CIRCLE (WITHIN 1/8"), 1 IS CODED. IF THE RESPONDENT DID NOT DRAW A CIRCULAR SHAPE, 0 IS CODED. SCORE RANGE IS FROM 0-2.]

0= Incorrect | 1= Partially correct | 2 = Correct | 97=Can't be assessed

2. Draw overlapping rectangles

Chora mistatili (rectangle) miwili inayoingiliana



Here are two rectangles. Copy it as best you can just next to the shape.

Hapa kuna mistatili (rectangles) miwili ningependa uchore. Nakili karibu nayo

DO NOT READ: Point to the overlapping rectangles

Start the timer to keep track of how long the FR is taking. This is not a timed task but FRs are expected to finish in less than 2 minutes. If it takes more than 2 minutes say **“Thank you, lets move on to the next shape”**. If the respondent insists, then allow them to keep going. If the respondent asks if it is a timed test, say **“You have about two minutes”**. If they ask how much time is left before two minutes have passed, say **“You still have time, please continue”**

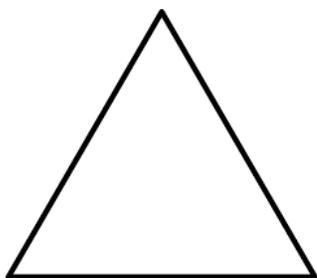
DO NOT READ: Score overlapping rectangles

[ENUMERATOR NOTE: IF THE RESPONDENT DREW TWO 4-SIDED, OVERLAPPING FIGURES THAT RESEMBLED THE ORIGINAL PICTURE, A 2 IS CODED. IF THE RESPONDENT DREW TWO 4-SIDED FIGURES BUT THE OVERLAPPING SECTIONS DID NOT RESEMBLE THE ORIGINAL PICTURE, A 1 IS CODED. IF THE RESPONDENT DID NOT DRAW TWO 4-SIDED FIGURES, A 0 IS CODED. SCORE RANGE IS 0-2]

0= Incorrect | 1= Partially correct | 2 = Correct | 97=Can't be assessed

3. Draw a triangle

Chora pembe tatu (Triangle)



Here is a drawing of a triangle. Copy it as best you can just next to the shape.

Hapa kuna pembe tatu(triangle) ningependa uchore. Nakili karibu nayo

DO NOT READ: Point to the triangle

Start the timer to keep track of how long the FR is taking. This is not a timed task but FRs are expected to finish in less than 2 minutes. If it takes more than 2 minutes say **“Thank you, lets move on to the next shape”**. If the respondent insists, then allow them to keep going. If the respondent asks if it is a timed test, say **“You have about two minutes”**. If they ask how much time is left before two minutes have passed, say **“You still have time, please continue”**

DO NOT READ: Score a triangle

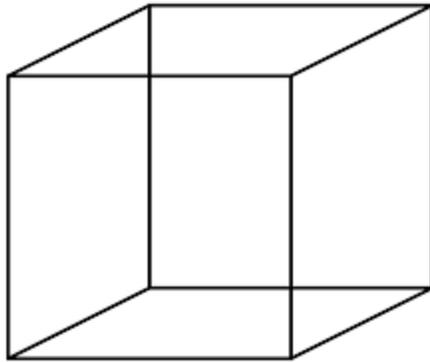
[ENUMERATOR NOTE: IF THE RESPONDENT DREW A 3-SIDED FIGURE, CLOSED ALL 3 ANGLES OF THE FIGURE, AND DREW SIDES OF APPROXIMATELY EQUAL LENGTH, A 3 IS ASSIGNED. IF THE RESPONDENT DREW THREE SIDES, CLOSED ALL THREE ANGLES OF THE FIGURE, BUT DID NOT DRAW SIDES OF APPROXIMATELY EQUAL LENGTH, A 2 IS ASSIGNED. IF THE RESPONDENT DREW THREE SIDES BUT DID NOT CLOSE ALL 3 ANGLES OF THE FIGURE, A 1 IS ASSIGNED. IF THE RESPONDENT DID NOT DRAW A 3-SIDED FIGURE, A 0 IS ASSIGNED. SCORE RANGE IS FROM 0-3.]

Select All That Apply

0= Incorrect | 1= Drew three sides | 2 = three angles are closed | 3 = Sides are of approximately equal length|97=Can't be assessed

4. Draw a cube

Chora mche (cube)



Here is a drawing of a cube. Copy it as best you can just next to the shape.

[Hapa kuna mche\(cube\) ningependa uchore. Nakili karibu nayo](#)

DO NOT READ:Point to the cube

Start the timer to keep track of how long the FR is taking. This is not a timed task but FRs are expected to finish in less than 2 minutes. If it takes more than 2 minutes say **“Thank you, lets move on to the next shape”**. If the respondent insists, then allow them to keep going. If the respondent asks if it is a timed test, say **“You have about two minutes”**. If they ask how much time is left before two minutes have passed, say **“You still have time, please continue”**

DO NOT READ:Score a cube

[ENUMERATOR NOTE: IF THE RESPONDENT DREW A 3-DIMENSIONAL FIGURE, DREW THE FRONTAL FACE CORRECTLY ORIENTED (EITHER LEFT OR RIGHT), DREW THE INTERNAL LINES CORRECTLY, AND DREW THE OPPOSITE SIDES PARALLEL WITH EACH OTHER (WITHIN 10 DEGREES), A 4 IS CODED. IF THE RESPONDENT DREW A 3-DIMENSIONAL FIGURE, DREW THE FRONTAL FACE CORRECTLY ORIENTED (EITHER LEFT OR RIGHT), AND DREW THE INTERNAL LINES CORRECTLY, A 3 IS CODED. IF THE RESPONDENT DREW A 3-DIMENSIONAL FIGURE AND DREW THE FRONTAL FACE CORRECTLY ORIENTED (EITHER LEFT OR RIGHT), A 2 IS CODED. IF THE RESPONDENT DREW A 3-DIMENSIONAL FIGURE, A 1 IS CODED. IF THE RESPONDENT DID NOT DRAW A 3- DIMENSIONAL FIGURE, A 0 IS CODED. SCORE RANGE IS FROM 0-4.] (Mark all that apply.

0= Incorrect | 1 = 3D only | 2 = Frontal face oriented correctly | 3 = Internal lines correctly drawn | 4 = *Opposite lines sides parallel with each other.* |97=Can't be assessed

Section 6.18: Trailmaking Test

I will ask you to use your pen to draw lines on the paper to connect some shapes. I will demonstrate how to do it as we go along. Nitakuuliza utumie kalamu kuchora mistari kwenye karatasi ili kuunganisha maumbo kadhaa. Nitaonyesha jinsi ya kuifanya tunapoendelea.

1. **DEMONSTRATION:** Connect the circles going from small to large as fast as you can. Like this [draw the trail]. Now you do this:

Uganisha miduara(circles) kutoka ndogo hadi kubwa haraka uwezavyo. Kama hii [drawthe trail]. Sasa fanya hivi:

[**ENUMERATOR NOTE:**Read the instructions and demonstrate how to do the task. Make sure the demonstration is done with the sheet of paper turned towards the respondent. Pause to see if the respondent understands the task. Erase your line and let the FR practice on their own. If the FR connects the circles correctly, Say “That is correct because you connected the circles going from small to large” and move on to the first practice round. If the respondent does not connect the shapes correctly, erase the line, repeat the instructions, and ask the respondent to try again. Repeat this until they connect the shapes correctly]

2. **PRACTICE #1:** Connect the circles going from small to large as fast as you can.

Uganisha miduara (circles) kutoka ndogo hadi kubwa haraka uwezavyo

1=Correct; 0=Incorrect; 999=DK/Did Not Understand Instruction 666=Refused

[**ENUMERATOR NOTE:** Only the respondent draws the trail. If the FR makes any errors (*for example, wrong order of circles, or they connect squares*),STOP them on the spot,erase the trail that they have connected wrongly and say out loud **ASANTE LAKINI TAFADHALI KUMBUKA ILIFAA KUUNGANISHA DUARA(CIRCLE) KUTOKA NDOGO HADI KUBWA TUJARIBU TENA “THANK YOU BUT REMEMBER TO CONNECT THE CIRCLES FROM SMALL TO LARGE. LET’S TRY AGAIN.”** Erase the trail, and allow the FR to practice again. The FR is allowed only one repeat if they make a mistake, otherwise move on to the next practice.]

2b **DO NOT READ:** Was this the first or second attempt.

1=First attempt

2=Second attempt

3. **PRACTICE #2:** Connect the circles going from small to large as fast as you can.

Uganisha miduara (circles) kutoka ndogo hadi kubwa haraka uwezavyo

1=Correct; 0=Incorrect; 999=DK/Did Not Understand Instruction 666=Refused

[ENUMERATOR NOTE: Only the respondent draws the trail. If the FR makes any errors (*for example, wrong order of circles, or they connect squares*), STOP them on the spot, erase the trail that they have connected wrongly and say out loud **ASANTE LAKINI TAFADHALI KUMBUKA ILIFAA KUUNGANISHA DUARA(CIRCLE) KUTOKA NDOGO HADI KUBWA TUJARIBU TENA “THANK YOU BUT REMEMBER TO CONNECT THE CIRCLES FROM SMALL TO LARGE. LET’S TRY AGAIN.”**

Erase the trail, and allow the FR to practice again. The FR is allowed only one repeat if they make a mistake, otherwise move on to the next practice..]

3b **DO NOT READ:** Was this the first or second attempt?

1=First attempt

2=Second attempt

[CAPI: If the respondent gets less than two correct trails on 2 and 3 then skip #4]

4. **TEST:** Please connect the shapes as before as fast as you can. **[CAPI START TIMER]**

Tafadhali unganisha maumbo kama hapo awali haraka uwezavyo

READ: Are you ready? Let’s begin

READ: Uko tayari? Tuanze.

ENUMERATOR NOTE: Once the FR says they are ready SWIPE to the next screen and begin the timer at once. Do not give feedback or correct the respondent

[ENUMERATOR NOTE: Begin the timer once the respondent has the shapes in front of them and you have read the instructions. Do not give feedback or correct the respondent. When the respondent indicates that he/she has finished (e.g. sets pen down, says 'I am finished', etc), stop the timer and move on to part 5.]

1=Correct; 0=Incorrect; 999=DK/Did Not Understand Instruction 666=Refused

[CAPI STOP TIMER]

{TAKE PICTURE OF THE TEST}

5. **DEMONSTRATION:** Connect the squares going from large to small as fast as you can. Like this [draw the trail]. Now you do this:

Uganisha mraba(squares) kutoka kubwa hadi ndogo

1=Correct; 2=Incorrect; 999=DK/Did Not Understand Instruction 666=Refused

[ENUMERATOR NOTE: Read the instructions and demonstrate how to do the task. Make sure the demonstration is done with the sheet of paper turned towards the respondent. Pause to see if the respondent understands the task. Erase your line and let the FR practice on their own. If the FR connects the squares correctly, Say "That is correct because you connected the squares going from large to small" and move on to the first practice round. If the respondent does not connect the shapes correctly, erase the line, repeat the instructions, and ask the respondent to try again. Repeat this until they connect the shapes correctly]]

6. **PRACTICE #1:** Connect the squares going from large to small as fast as you can.

Uganisha mraba(squares) kutoka kubwa hadi ndogo

1=Correct; 0=Incorrect; 999=DK/Did Not Understand Instruction 666=Refused

[ENUMERATOR NOTE: If the FR makes any errors (*for example, wrong order of squares, OR connecting circles*), Say out loud: **ASANTE LAKINI TAFADHALI KUMBUKA ILIFAA KUUNGANISHA Mraba(SQUARES) KUTOKA KUBWA HADI NDOGO TUJARIBU TENA "THANK YOU BUT REMEMBER TO CONNECT THE SQUARES FROM LARGE TO SMALL. LET'S TRY AGAIN."**, then erase the trail, and allow the FR to practice again. The FR is allowed only one repeat if they make a mistake, otherwise move on to the next practice.]

DO NOT READ: Was this the first or second attempt?

7. Connect the squares going from large to small as fast as you can.

Unganisha mraba(squares) kutoka kubwa hadi ndogo

1=Correct; 0=Incorrect; 999=DK/Did Not Understand Instruction 666=Refused

[ENUMERATOR NOTE: If the FR makes any errors (*for example, wrong order of squares, OR connecting circles*), Say out loud: **ASANTE LAKINI TAFADHALI KUMBUKA ILIFAA KUUNGANISHA MRABA(SQUARES) KUTOKA NDOGO HADI KUBWA TUJARIBU TENA “THANK YOU BUT REMEMBER TO CONNECT THE SQUARES FROM LARGE TO SMALL. LET’S TRY AGAIN.”**, then erase the trail, and allow the FR to practice again. The FR is allowed only one repeat if they make a mistake, otherwise move on to the next practice.]x

DO NOT READ: Was this the first or second attempt?

1=First attempt

2=Second attempt

[CAPI: If the respondent gets less than two correct trails on 6 and 7 then skip #8]

8. Please connect the shapes as before as fast as you can.. **[CAPI START TIMER]**

Tafadhali unganisha maumbo kama hapo awali haraka uwezavyo

READ: Are you ready? Let’s begin

READ: Uko tayari? Tuanze.

ENUMERATOR NOTE:Once the FR says they are ready SWIPE to the next screen and begin the timer at once. Do not give feedback or correct the respondent

[ENUMERATOR NOTE: Begin the timer once the respondent has the shapes in front of them and you have read the instructions. Do not give feedback or correct the participant. When the participant indicates that he/she has finished (e.g. sets pen down, says ‘I am finished’, etc), stop the timer and move on to part 9]

1=Correct; 0=Incorrect; 999=DK/Did Not Understand Instruction 666=Refused

[CAPI STOP TIMER]

[CAPI: If the respondent gets less than two correct trails then skip to Section 19]

{TAKE PICTURE OF THE TEST}

9. Alternate between the shapes. From the largest square to the smallest circle, then to the next largest square to the next smallest circle. Continue through all the shapes as fast as you can. Like this [draw the trail]. Now you do this: Badilisha kati ya maumbo kutoka kwa mraba(square) kubwa zaidi hadi duara(circle) ndogo, kisha ufuatilie mraba kubwa Zaidi hadi duara ndogo. Endelea kupitia maumbo yote yote haraka uwezavyo kama hii [draw the trail]. Sasa fanya hivi:

[ENUMERATOR NOTE: Read the instructions and demonstrate how to do the task. Make sure the demonstration is done with the sheet of paper turned towards the respondent. Pause to see if the respondent understands the task. Erase your line and let the FR practice on their own. If the FR connects the alternating shapes correctly, Say “That is correct because you connected the shapes alternating from the largest square to the smallest circle, then to the next largest square to the next smallest circle”. Hiyo ni sawa kwa sababu uliunganisha maumbo yanayopishana kutoka mraba kubwa hadi duara ndogo kisha mraba kubwa inayofuata hadi duara ndogo. Then move on to the first practice round. If the respondent does not connect the shapes correctly, erase the line, repeat the instructions, and ask the respondent to try again. Repeat this until they connect the shapes correctly.]

10. PRACTICE #1: Alternate between the shapes. From the largest square to the smallest circle, then to the next largest square to the next smallest circle. Continue through all the shapes as fast as you can. Badilisha kati ya maumbo kutoka kwa mraba(square) kubwa zaidi hadi duara(circle) ndogo, kisha ufuatilie mraba kubwa Zaidi hadi duara ndogo. Endelea kupitia maumbo yote haraka uwezavyo.
1=Correct; 0=Incorrect; 999=DK/Did Not Understand Instruction 666=Refused

[ENUMERATOR NOTE: If the FR makes any errors (*for example, not alternating shapes, or connecting the shapes in the wrong order*), Say out loud: ASANTE LAKINI TAFADHALI KUMBUKA ILIFAA KUUNGANISHA KUTOKA KWA MRABA(SQUARE) KUBWA ZAIDI HADI DUARA(CIRCLE)NDOGO KISHA UFUATILIE MRABA KUBWA ZAIDI HADI DUARA NDOGO ENDELEA KUPITIA MAUMBO YOTE. TUJARIBU TENA “THANK YOU BUT REMEMBER TO ALTERNATE BETWEEN THE SHAPES FROM LARGEST SQUARE TO THE SMALLEST CIRCLE, THEN TO THE NEXT LARGEST SQUARE TO THE NEXT SMALLEST CIRCLE. CONTINUE THROUGH ALL THE SHAPES. LET’S TRY AGAIN.”. The FR is allowed only one repeat if they make a mistake, otherwise move on to the next practice.]

DO NOT READ: Was this the first or second attempt?
1=First attempt

2=Second attempt

11. **PRACTICE #2:** Alternate between the shapes. From the largest square to the smallest circle, then to the next largest square to the next smallest circle. Continue through all the shapes.as fast as you can.

Badilisha kati ya maumbo.kutoka kwa mraba(square) kubwa zaidi hadi duara (circle)ndogo, kisha ufuatilie mraba kubwa Zaidi hadi duara ndogo.Endelea kupitia maumbo yote

1=Correct; 0=Incorrect; 999=DK/Did Not Understand Instruction 666=Refused

[ENUMERATOR NOTE: If the FR makes any errors (*for example, not alternating shapes, OR connecting the shapes in the wrong order*), Say out loud: **ASANTE LAKINI TAFADHALI KUMBUKA ILIFAA KUUNGANISHA KUTOKA KWA MRABA(SQUARE) KUBWA ZAIDI HADI DUARA(CIRCLE)NDOGO KISHA UFUATILIE MRABA KUBWA ZAIDI HADI DUARA NDOGO ENDELEA KUPITIA MAUMBO YOTE. TUJARIBU TENA“THANK YOU BUT REMEMBER TO ALTERNATE BETWEEN THE SHAPES FROM LARGEST SQUARE TO THE SMALLEST CIRCLE, THEN TO THE NEXT LARGEST SQUARE TO THE NEXT SMALLEST CIRCLE. CONTINUE THROUGH ALL THE SHAPES. LET’S TRY AGAIN.”.** The FR is allowed only one repeat if they make a mistake, otherwise move on to the next practice.]

[CAPI: If the respondent gets less than two correct trails on 10 and 11 then skip to Section 19]

DO NOT READ: Was this the first or second attempt?

1=First attempt

2=Second attempt

12. **TEST:** Please connect the shapes as before as fast as you can. **[CAPI START TIMER]**
Tafadhali unganisha maumbo kama hapo awali haraka uwezavyo

READ: Are you ready? Let’s begin

READ: Uko tayari? Tuanze.

ENUMERATOR NOTE: Once the FR says they are ready SWIPE to the next screen and begin the timer at once. Do not give feedback or correct the respondent

[ENUMERATOR NOTE: Begin the timer once the respondent has the shapes in front of them and you have read the instructions. Do not give feedback or correct the participant. When the participant indicates that he/she has finished (e.g. sets pen down, says 'I am finished', etc), stop the timer and move on to Section 19.]

1=Correct;0 =Incorrect; 999=DK/Did Not Understand Instruction 666=Refused

[CAPI STOP TIMER]

{TAKE PICTURE OF THE TEST}

Section 6.19: Go/No-Go Trial

In this task, when I tap the table once, like this (*tap*), I want you to tap twice. And when I tap twice (*tap tap*) I want you to tap once. Let's practice.

Katika kazi hii, ninapogonga meza mara moja, kama hivi (*tap*), nataka ugongwe mara mbili. Na ninapogonga mara mbili (*tap tap*) nataka ugongwe mara moja. Wacha tujaribu.

So when I tap once (*tap*) - you tap...? (*subject taps*) ...and when I tap twice (*tap tap*) - you tap...? (*subject taps*)

Kwa hivyo ninapogonga mara moja (*tap*) - unagonga...? (*subject taps*) ... na ninapogonga mara mbili (*tap tap*) - unagonga...? (*subject taps*)

[ENUMERATOR NOTE:

- **IF CORRECT:** SAY, "OK that's right, remember - I tap once, you tap twice. I tap twice, you tap once. Here we go."
Sawa hiyo ni sawa, kumbuka - ninagonga mara moja, unagonga mara mbili. Ninagonga mara mbili, unagonga mara moja. Haya, twende kazi.
- **IF INCORRECT:** SAY, "Let's try again: remember when I tap once, you tap twice. And when I tap twice, you tap once - here we go" (repeat the above practice trial).
"Wacha tujaribu tena: kumbuka ninapogonga mara moja, unagonga mara mbili. Na ninapogonga mara mbili, unagonga mara moja – haya, tuanze"

INSTRUCTIONS AND PRACTICE ROUNDS CAN BE REPEATED ONE MORE TIME IF NECESSARY, MAKING A MAXIMUM OF THREE TIMES.]

I will now begin the activity.

Sasa nitaanza shughuli hiyo.

[ENUMERATOR NOTE: IF THE RESPONDENT HAS FIVE CONSECUTIVE INCORRECT RESPONSES, CONTINUE TO THE NEXT PART OF THIS QUESTION.]

	1 = Correct 0 = Incorrect 666 = Refused
Once	
Twice	
Twice	
Once	
Twice	
Once	
Once	
Twice	
Twice	
Once	

Now I am going to change the rules. This time when I tap once, you tap twice just like before. But now, when I tap twice, you do nothing - OK? Let us practice. So, when I tap once (tap), you tap...? And when I tap twice (tap tap), you...?

Sasa nitabadilisha sheria. Wakati huu ninapogonga mara moja, unagonga mara mbili tu kama hapo awali. Lakini sasa, ninapogonga mara mbili, hufanyi chochote - Sawa? Hebu tufanye zoezi. Kwa hivyo, ninapogonga mara moja (tap), unagonga...? Na ninapogonga mara mbili (tap tap), una...?

[ENUMERATOR NOTE: IF AN INCORRECT RESPONSE IS GIVEN, READ:

- "Let's do that again. Remember, when I tap once, you tap twice, and when I tap twice, you do nothing – let's practice again"
- "Wacha tufanye hivyo tena. Kumbuka, ninapogonga mara moja, unagonga mara mbili, na ninapogonga mara mbili, hufanyi chochote - wacha tufanye zoezi tena"

(TAP ONCE, THEN TWICE). IF THE SUBJECT GIVES ANOTHER INCORRECT RESPONSE, REPEAT THE INSTRUCTIONS AGAIN AND ALLOW ONE MORE PRACTICE ROUND, MAKING THREE ROUNDS TOTAL IN ALL.]

[ENUMERATOR NOTE: WHEN THE RESPONDENT HAS CORRECTLY COMPLETED THE PRACTICE ROUND(S), READ:

- "OK that's right. Remember, when I tap once, you tap twice. And when I tap twice, you do nothing - here we go."
- "Sawa hiyo ni sawa. Kumbuka, ninapogonga mara moja, unagonga mara mbili. Na ninapogonga mara mbili, hufanyi chochote - hapa tunaenda."

THE ENUMERATOREXAMINER ALWAYS BEGINS THE SEQUENCE WITH TWO TAPS. IF THE RESPONDENTSUBJECT RESPONDS INCORRECTLY, THE ENUMERATOR/EXAMINER STOPS AND REMINDS HIM/HER OF THE INSTRUCTIONS AGAIN. THIS IS THE LAST TIME A REMINDER CAN BE GIVEN.]

Now let's begin.

Sasa hebu tuanze.

[ENUMERATOR NOTE: IF THE RESPONDENT HAS FIVE CONSECUTIVE INCORRECT RESPONSES, CONTINUE TO THE NEXT SECTION.]

Begin:	1 = Correct 0 = Incorrect 666 = Refused
Twice	
Once	

Once	
Twice	
Twice	
Twice	
Once	
Once	
Once	
Twice	

Section 6.20: Hand Movement Sequencing Test

In this task, I will now show you a hand-sequence movement. After I show you, I will ask you to repeat the action. Are you ready to start?

Katika kazi hii, sasa nitakuonyesha harakati ya mlolongo wa mkono. Baada ya kukuonyesha, nitakuuliza urudie hatua. Je, uko tayari kuanza?

- a. Palm-up Palm-Down

Now I'm going to make some hand movements, watch me. *[DEMONSTRATE THE "PALM UP AND PALM DOWN MOVEMENT" 3 TIMES]*. I want you to make the same movements with me then alone using two hands. *[PERFORM THE MOVEMENT 3 TIMES WITH THE RESPONDENT. IF THE RESPONDENT DOES NOT IMMEDIATELY START THE MOVEMENTS WITH YOU, SAY: "Copy me, do as I am doing."]* IF THE RESPONDENT DOES NOT UNDERSTAND AFTER THE THIRD MOVEMENT, DEMONSTRATE ANOTHER 3 TIMES AGAIN, THEN PERFORM THE MOVEMENT 3 MORE TIMES WITH THE RESPONDENT. IF THE

RESPONDENT DOES NOT UNDERSTAND AFTER THE SECOND DEMONSTRATION THEN MOVE ON TO HAVING THE RESPONDENT REPEAT 5 TIMES ON THEIR OWN.

Now, can you do it on your own 5 times using two hands? *[LET THE RESPONDENT REPEAT THE MOVEMENTS FOR 5 TIMES]*

Sasa ninaenda kufanya harakati za mkono, niangalie. *[DEMONSTRATE “THE PALM UP AND PALM DOWN MOVEMENT” 3 TIMES].* Nataka ufanye harakati sawa na mimi na kisha peke yako ukitumia mikono miwili. *[PERFORM THE MOVEMENT 3 TIMES WITH THE RESPONDENT. IF THE RESPONDENT DOES NOT IMMEDIATELY START THE MOVEMENTS WITH YOU, SAY “Nakili ninavyofanya.”]* Sasa unaweza kuifanya peke yako mara tano(5) ukitumia mikono miwili. *[LET THE RESPONDENT REPEAT THE MOVEMENTS FOR 5 TIMES].* IF THE RESPONDENT DOES NOT UNDERSTAND AFTER THE THIRD MOVEMENT, DEMONSTRATE ANOTHER 3 TIMES AGAIN, THEN PERFORM THE MOVEMENT 3 MORE TIMES WITH THE RESPONDENT. IF THE RESPONDENT DOES NOT UNDERSTAND AFTER THE SECOND DEMONSTRATION THEN MOVE ON TO HAVING THE RESPONDENT REPEAT 5 TIMES ON THEIR OWN.]

[ENUMERATOR NOTE: DEMONSTRATE THE MOVEMENT WITH PALM STRETCHED AND FINGERS EXTENDED THREE TIMES. PALM UP AND PALM DOWN WILL COUNT AS ONE CYCLE. ASK THE RESPONDENT TO COPY THE MOVEMENT WITH YOU THREE TIMES. LET THE RESPONDENT REPEAT THE MOVEMENT ALONE FOR 5 TIMES. DO NOT REPEAT THE MOVEMENT ONCE THE RESPONDENT HAS ATTEMPTED TO DO IT.]

1= Correctly repeated all 5 movements | 2= Correctly repeated 1-4 movements | 3= Incorrect or did not repeat | 97= Not assessed

b. Clenched Extended Hand

Now watch this next movement. *[DEMONSTRATE “CLENCHED EXTENDED HAND MOVEMENT” 3 TIMES].* I want you to make the same movements with me and then alone using two hands. *[PERFORM THE MOVEMENT 3 TIMES WITH THE RESPONDENT. IF THE RESPONDENT DOES NOT IMMEDIATELY START THE MOVEMENTS WITH YOU, SAY: “Copy me, do as I am doing.”]* IF THE RESPONDENT DOES NOT UNDERSTAND AFTER THE THIRD MOVEMENT, DEMONSTRATE ANOTHER 3 TIMES AGAIN, THEN PERFORM THE MOVEMENT 3 MORE TIMES WITH THE RESPONDENT. IF THE RESPONDENT DOES NOT UNDERSTAND AFTER THE SECOND DEMONSTRATION THEN MOVE ON TO HAVING THE RESPONDENT REPEAT 5 TIMES ON THEIR OWN.] Now, can you do it on your own 5 times using two hands? *[LET THE RESPONDENT REPEAT THE MOVEMENTS FOR 5 TIMES]*

Sasa ninaenda kufanya harakati za mkono, niangalie. [DEMONSTRATE CLENCHED EXTENDED HAND MOVEMENT” 3 TIMES]. Nataka ufanye harakati sawa na mimi na kisha peke yako ukitumia mikono miwili. [PERFORM THE MOVEMENT 3 TIMES WITH THE RESPONDENT. IF THE RESPONDENT DOES NOT IMMEDIATELY START THE MOVEMENTS WITH YOU, SAY “Ninakili ninavyofanya.”] Sasa unaweza kuifanya peke yako mara tano(5) ukitumia mikono miwili. [LET THE RESPONDENT REPEAT THE MOVEMENTS FOR 5 TIMES].

[ENUMERATOR NOTE: WITH FINGERS FULLY EXTENDED AND THE RESPONDENT FOLLOWING, THE ENUMERATOR PLACES HIS RIGHT HAND ON A TABLE, THEN IN A FIST WITH THE KNUCKLES DOWN, AND THEN PALM DOWN WITH FINGERS EXTENDED. ENUMERATOR AND RESPONDENT THEN REPEAT THIS THREE MORE TIMES. RESPONDENTS ARE THEN ASKED TO REPEAT THE MOVEMENTS UNGUIDED BY THE ENUMERATOR. IF THE RESPONDENT DOES NOT UNDERSTAND AFTER THE THIRD MOVEMENT, DEMONSTRATE ANOTHER 3 TIMES AGAIN, THEN PERFORM THE MOVEMENT 3 MORE TIMES WITH THE RESPONDENT. IF THE RESPONDENT DOES NOT UNDERSTAND AFTER THE SECOND DEMONSTRATION THEN MOVE ON TO HAVING THE RESPONDENT REPEAT 5 TIMES ON THEIR OWN. THIRD OPTION IS RECORDED IF THE RESPONDENT IS UNABLE TO MIMIC THE MOVEMENT OR COMPLETE FIVE INDEPENDENT CYCLES.]

1= Correctly repeated all 5 movements | 2= Correctly repeated 1-4 movements | 3= Incorrect or did not repeat | 97= Not assessed

c. Fist-Edge-Palm

Now watch this next movement. [DEMONSTRATE “FIST-EDGE-PALM MOVEMENT” 3 TIMES]. I want you to make the same movements with me and then alone using your {dominant hand}. [PERFORM THE MOVEMENT 3 TIMES WITH THE RESPONDENT. IF THE RESPONDENT DOES NOT IMMEDIATELY START THE MOVEMENTS WITH YOU, SAY: “Copy me, do as I am doing.” IF THE RESPONDENT DOES NOT UNDERSTAND AFTER THE THIRD MOVEMENT, DEMONSTRATE ANOTHER 3 TIMES AGAIN, THEN PERFORM THE MOVEMENT 3 MORE TIMES WITH THE RESPONDENT. IF THE RESPONDENT DOES NOT UNDERSTAND AFTER THE SECOND DEMONSTRATION THEN MOVE ON TO HAVING THE RESPONDENT REPEAT 5 TIMES ON THEIR OWN.]] Now, can you do it on your own 5 times using your {dominant hand}? [LET THE RESPONDENT REPEAT THE MOVEMENTS FOR 5 TIMES]

Sasa ninaenda kufanya harakati za mkono, niangalie. [DEMONSTRATE “FIST-EDGE-PALM MOVEMENT MOVEMENT” 3 TIMES]. Nataka ufanye harakati sawa na mimi na kisha peke yako ukitumia mkono wako wa {dominant hand}. [PERFORM THE MOVEMENT 3 TIMES WITH THE RESPONDENT. IF THE RESPONDENT DOES NOT IMMEDIATELY START THE MOVEMENTS WITH YOU, SAY “Ninakili ninavyofanya.”] Sasa unaweza kuifanya peke yako mara tano(5) ukitumia mkono wako wa {dominant hand}. [LET THE RESPONDENT REPEAT THE MOVEMENTS FOR 5 TIMES].

[ENUMERATOR NOTE: RESPONDENT IS ASKED TO TAP THE TABLE WITH A FIST, THEN SIDE OF OPEN HAND, AND OPEN PALM. ENUMERATOR AND RESPONDENT THEN REPEAT THIS THREE MORE TIMES. RESPONDENTS ARE THEN ASKED TO REPEAT THE MOVEMENTS UNGUIDED BY THE ENUMERATOR. IF THE RESPONDENT DOES NOT UNDERSTAND AFTER THE THIRD MOVEMENT, DEMONSTRATE ANOTHER 3 TIMES AGAIN, THEN PERFORM THE MOVEMENT 3 MORE TIMES WITH THE RESPONDENT. IF THE RESPONDENT DOES NOT UNDERSTAND AFTER THE SECOND DEMONSTRATION THEN MOVE ON TO HAVING THE RESPONDENT REPEAT 5 TIMES ON THEIR OWN. THIRD OPTION IS RECORDED IF THE RESPONDENT IS UNABLE TO MIMIC THE MOVEMENT OR COMPLETE FIVE INDEPENDENT CYCLES.]

1= Correctly repeated all 5 movements | 2= Correctly repeated 1-4 movements | 3= Incorrect or did not repeat | 97= Not assessed

Section 6.21: Found a Lost Child

I will now read a scenario and ask you what you would do. What would you do if you found a lost child that is looking for their parents on the road?

Sasa nitasoma hali na kukuuliza utafanya nini. Ungefanya nini ikiwa utampata mtoto aliyepotea barabarani na anatafuta wazazi wake?

[ENUMERATOR NOTE: CORRECT ANSWERS COULD INCLUDE IS: TAKE CHILD TO THE POLICE STATION/PELEKA MTOTO KWA KITUO CHA POLISI, TAKE CHILD TO LOCAL LEADERS/PELEKA MTOTO KWA VIONGOZI WA MTAJ, TAKE CHILD TO ADMINISTRATIVE OFFICERS/PELEKA MTOTO KWA MAAFISA TAWALA, OR SOME OTHER APPROPRIATE RESPONSE.]

1 = Correct | 0 = Incorrect | 999 = Don't know/doesn't understand | 666 = Refused

Section 6.23: Story Recall Delayed #1

A while back I read you two stories and asked you to tell me everything about the stories that you could remember as you would remember the words of a song. I would like to know if you still remember anything from these stories. Thinking back to the first story I told you, tell me everything that you remember about it. Start at the beginning. Hapo nyuma kidogo nilikusomea hadithi mbili na kukuuliza uniambie kila kitu kuhusu hadithi ambazo unaweza kukumbuka kama vile ungekumbuka maneno ya wimbo. Ningependa

kujua ikiwa bado unakumbuka chochote kutoka kwa hadithi hizi. Ukifikiria nyuma hadithi ya kwanza niliyokuambia, niambie kila kitu unachokumbuka kuihusu. Anza mwanzoni.

Enumerator Note: The Respondent could begin recalling story points from the first or the second story.

1. [Do not read out loud] Which story is the FR recalling?

1= Story 1: Brave Man, House on fire, children rescued

2= Story 2: Anne Wanyonyi, East Nairobi, Robbed

{if Q1=1 Show the Braveman Story Options on the screen}

Story Recall	0=Not correct, not mentioned' 1=Approximate answer; 2=Exact Answer
<u>3 children</u>	
<u>alone at home</u>	
<u>house caught on fire</u>	
<u>brave man</u>	
<u>climbed</u>	
<u>back window</u>	
<u>carry them to safety</u>	
<u>minor cuts</u>	
<u>bruises</u>	
<u>all were well</u>	
None Recalled	

Story Recall	0=Not correct, not mentioned' 1=Approximate answer; 2=Exact Answer
Watoto watatu	
nyumbani peke yao	
nyumba hiyo ikashika moto	
mwanaume jasiri	
kupanda	
dirisha la nyuma	
kuwabeba kwa usalama	
mikato madogo	
majeraha	
wote walikuwa sawa	

{if Q1=2 Show the Robbery Story Options on the screen}

English version

Story Recall	2=Exact Answer; 1=Approximate answer; 0=Not correct, not mentioned
Anne	

<u>Wanyonyi</u>	
From <u>East</u>	
<u>Nairobi</u>	
<u>Employed</u>	
as a <u>cook</u>	
in a <u>school</u>	
<u>kitchen</u>	
<u>reported</u>	
at the <u>police</u>	
<u>station</u>	
that she had been <u>held up</u>	
on <u>Main street</u>	
the <u>night before</u>	
and <u>robbed</u>	
of <u>200 shillings</u>	
She had <u>four</u>	
<u>small children</u>	
the <u>rent was due</u>	

and they had <u>not eaten</u>	
for <u>two days</u>	
The <u>police,</u>	
<u>touched</u> by the woman's story	
<u>took up a collection</u>	
for <u>her.</u>	
None Recalled	

Swahili version

Story Recall	0=Not correct, not mentioned 1=Approximate answer; 2=Exact Answer
<u>Anne</u>	
<u>Wanyonyi</u>	
kutoka <u>mashariki</u>	
<u>Nairobi</u>	
<u>aliajiriwa</u>	
kama <u>mpishi</u>	
katika <u>shule</u>	

<u>jikoni</u>	
aliripoti	
kwa polisi	
<u>kituo</u>	
kwamba alikuwa <u>amezuiliwa</u>	
kwenye <u>barabara kuu</u>	
<u>usiku uliopita</u>	
na <u>kuibiwa</u>	
<u>shilingi 200</u>	
Alikuwa na <u>wanne</u>	
<u>watoto wadogo</u>	
<u>kodi ilitimia</u>	
walikuwa <u>hawajakula</u>	
kwa <u>siku mbili</u>	
<u>Polisi</u>	
<u>waliguswa</u> na hadithi ya huyo mwanamke	
<u>walifanya mchango</u>	
kwa huyo <u>mwanamke</u>	

Section 6:24: Story Recall Delayed #2

Read: Thank you. Now thinking back to the second story I told you, tell me everything that you remember about it as you would remember the words of a song. Start at the beginning.

Asante. Sasa ukifikiria nyuma kwenye hadithi ya pili niliyokuambia, niambie kila kitu ambacho unakumbuka kuihusu kama vile ungekumbuka maneno ya wimbo. Anza mwanzoni.

2. [Do not read out loud] Which story is the FR recalling?
1= Story 1: Brave Man, House on fire, children rescued
2= Story 2: Anne Wanyonyi, East Nairobi, Robbed

{if Q1=1 Show the Braveman Story Options on the screen}

Story Recall	0=Not correct, not mentioned' 1=Approximate answer; 2=Exact Answer
<u>3 children</u>	
<u>alone at home</u>	
<u>house on fire</u>	
<u>brave man</u>	
<u>climbed</u>	
<u>back window</u>	
<u>carry them to safety</u>	

<u>minor cuts</u>	
<u>bruises</u>	
all were <u>well</u>	
None Recalled	

Story Recall	0=Not correct, not mentioned' 1=Approximate answer; 2=Exact Answer
<u>Watoto watatu</u>	
<u>nyumbani peke yao</u>	
<u>nyumba hiyo ikashika moto</u>	
<u>mwanaume jasiri</u>	
<u>kupanda</u>	
<u>dirisha la nyuma</u>	
<u>kuwabeba kwa usalama</u>	
<u>mikato madogo</u>	
<u>majeraha</u>	
wote walikuwa <u>sawa</u>	

{if Q1=2 Show the Robbery Story Options on the screen}

English version

Story Recall	2=Exact Answer; 1=Approximate answer; 0=Not correct, not mentioned
<u>Anne</u>	
<u>Wanyonyi</u>	
From <u>East</u>	
<u>Nairobi</u>	
<u>Employed</u>	
as a <u>cook</u>	
in a <u>school</u>	
<u>kitchen</u>	
<u>reported</u>	
at the <u>police</u>	
<u>station</u>	
that she had been <u>held up</u>	
on <u>Main street</u>	
the <u>night before</u>	
and <u>robbed</u>	

of <u>200 shillings</u>	
She had <u>four</u>	
<u>small children</u>	
the <u>rent was due</u>	
and they had <u>not eaten</u>	
for <u>two days</u>	
The <u>police,</u>	
<u>touched</u> by the woman's story	
<u>took up a collection</u>	
for <u>her.</u>	
None Recalled	

Swahili version

Story Recall	0=Not correct, not mentioned 1=Approximate answer; 2=Exact Answer
<u>Anne</u>	
<u>Wanyonyi</u>	
kutoka <u>mashariki</u>	

<u>Nairobi</u>	
<u>aliajiriwa</u>	
kama <u>mpishi</u>	
katika <u>shule</u>	
<u>jikoni</u>	
<u>aliripoti</u>	
kwa <u>polisi</u>	
<u>kituo</u>	
kwamba alikuwa <u>amezuiliwa</u>	
kwenye <u>barabara kuu</u>	
<u>usiku uliopita</u>	
na <u>kuibiwa</u>	
<u>shilingi 200</u>	
Alikuwa na <u>wanne</u>	
<u>watoto wadogo</u>	
<u>kodi ilitimia</u>	
walikuwa <u>hawajakula</u>	
kwa <u>siku mbili</u>	

<u>Polisi</u>	
<u>waliguswa</u> na hadithi ya huyo mwanamke	
<u>walifanya mchango</u>	
kwa huyo <u>mwanamke</u>	

Section 6.25: Story Recall: Recognition

A few moments ago I told you a story. I will not tell you beforehand which story it was from. Then I will say statements about the story and ask you to tell me whether the statements are true. Please say yes if the statement is true, and no if the statement is false.

Muda mchache uliopita nilikusimulia hadithi. Sitakuambia kabla ni kwa hadithi gani ilitoka. Kisha nitasema kauli kuhusu hadithi na kukuliza uniambie kama taarifa hizo ni za kweli. Ndiyo ikiwa taarifa hiyo ni ya ukweli na hapana ikiwa taarifa hiyo ni ya uongo.

Story Recall	1=Yes 2=No 999=Don't Know 666=Refused
The woman's name is Anne Wanyonyi Jina la huyo mwanamke ni Anne Wanyonyi	
She is from East Nairobi Anatoka mashariki mwa Nairobi	
She works as a cook Anafanya kazi kama mpishi	
She works in a restaurant Anafanya kazi kwa mgahawa	
She has four children	

Ana watoto wanne	
The children are teens Watoto ni vijana	
She was robbed on Main street Aliibiwa kwenye barabara kuu	
The robbery took place two nights before Wizi huo ulifanyika usiku mbili kabla	
She reports the robbery at the police station Anaripoti wizi huo katika kituo cha polisi	
She is robbed of 450 Shillings Anaibiwa shilingi 450	
Her children had not eaten for 4 days. Watoto wake walikuwa hawajala kwa siku nne	
Her rent is due. Kodi ilitimuailidaiwa	
The police catches the thief Polisi wanamkamata mwizi	
The police was, touched by the woman's story The police feels sorry for the woman Polisi waliguswa na hadithi ya huyo mwanamke Polisi wamuonea huruma mwanamke huyo	

The police takes up collection Polisi walifanya mchango	
Total Score	0-15

Section 6.26: Constructional Praxis (Delayed Recall)

A few moments ago I asked you to draw four shapes. Do you recall what these shapes looked like. Can you please draw these shapes on this piece of paper?

Dakika chache zilizopita nilikuuliza uchore maumbo manne. Je, unakumbuka jinsi maumbo haya yalivyoonekana. Je, unaweza tafadhali kuchora maumbo haya kwenye kipande hiki cha karatasi?

Are you ready? Let's begin.

Uko tayari? Hebu tuanze.

Start the timer to keep track of how long the FR is taking. This is not a timed task but FRs are expected to finish in less than 8 minutes (**480 seconds**). If it takes more than 2 minutes say **"Thank you, lets move on to the next shape"**. If the respondent insists, then allow them to keep going. If the respondent asks if it is a timed test, say **"You have about two minutes"**. If they ask how much time is left before two minutes have passed, say **"You still have time, please continue"**

DO NOT READ: Score two circles intersecting

[ENUMERATOR NOTE: IF THE RESPONDENT DREW A CIRCULAR SHAPE AND DREW A CLOSED CIRCLE (WITHIN 1/8"), 2 IS CODED. IF THE RESPONDENT DREW A CIRCULAR SHAPE BUT DID NOT DRAW A CLOSED CIRCLE (WITHIN 1/8"), 1 IS CODED. IF THE RESPONDENT DID NOT DRAW A CIRCULAR SHAPE, 0 IS CODED. SCORE RANGE IS FROM 0-2.]

0= Incorrect | 1= Partially correct | 2 = Circular Shape | -66 = can't remember | 97 = can't be assessed

DO NOT READ: Score overlapping rectangles

[ENUMERATOR NOTE: IF THE RESPONDENT DREW TWO 4-SIDED, OVERLAPPING FIGURES THAT RESEMBLED THE ORIGINAL PICTURE, A 2 IS CODED. IF THE RESPONDENT DREW TWO 4-SIDED FIGURES BUT THE OVERLAPPING SECTIONS DID NOT RESEMBLE THE ORIGINAL PICTURE, A 1 IS CODED. IF THE RESPONDENT DID NOT DRAW TWO 4-SIDED FIGURES, A 0 IS CODED. SCORE RANGE IS 0-2]

0= Incorrect | 1= Partially correct | 2 = Correct | -66 = can't remember | 97 = can't be assessed

DO NOT READ: Score a triangle

[ENUMERATOR NOTE: IF THE RESPONDENT DREW A 3-SIDED FIGURE, CLOSED ALL 3 ANGLES OF THE FIGURE, AND DREW SIDES OF APPROXIMATELY EQUAL LENGTH, A 3 IS ASSIGNED. IF THE RESPONDENT DREW THREE SIDES, CLOSED ALL THREE ANGLES OF THE FIGURE, BUT DID NOT DRAW SIDES OF APPROXIMATELY EQUAL LENGTH, A 2 IS ASSIGNED. IF THE RESPONDENT DREW THREE SIDES BUT DID NOT CLOSE ALL 3 ANGLES OF THE FIGURE, A 1 IS ASSIGNED. IF THE RESPONDENT DID NOT DRAW A 3-SIDED FIGURE, A 0 IS ASSIGNED. SCORE RANGE IS FROM 0-3.]

0= Incorrect | 1= Drew three sides | 2 = Three angles are closed | 3 = Sides are of approximately equal length

| -66 = can't remember | 97 = can't be assessed

DO NOT READ: Score a cube

[ENUMERATOR NOTE: IF THE RESPONDENT DREW A 3-DIMENSIONAL FIGURE, DREW THE FRONTAL FACE CORRECTLY ORIENTED (EITHER LEFT OR RIGHT), DREW THE INTERNAL LINES CORRECTLY, AND DREW THE OPPOSITE SIDES PARALLEL WITH EACH OTHER (WITHIN 10 DEGREES), A 4 IS CODED. IF THE RESPONDENT DREW A 3-DIMENSIONAL FIGURE, DREW THE FRONTAL FACE CORRECTLY ORIENTED (EITHER LEFT OR RIGHT), AND DREW THE INTERNAL LINES CORRECTLY, A 3 IS CODED. IF THE RESPONDENT DREW A 3-DIMENSIONAL FIGURE AND DREW THE FRONTAL FACE CORRECTLY ORIENTED (EITHER LEFT OR RIGHT), A 2 IS CODED. IF THE RESPONDENT DREW A 3-DIMENSIONAL FIGURE, A 1 IS CODED. IF THE RESPONDENT DID NOT DRAW A 3- DIMENSIONAL FIGURE, A 0 IS CODED. SCORE RANGE IS FROM 0-4.]

0= Incorrect | 1 = 3D only | 2 = Frontal face oriented correctly | 3 = Internal lines correctly drawn | 4 = Opposite lines parallel | -66 = Can't remember | 97 = Can't be assessed

Take a photo of the delayed constructional praxis

Section 6.27: Token Test

I will now show you a card with tokens of different shapes, sizes, and colors. {Show}. Please look at these shapes.

Sasa nitakuonyesha kadi iliyo na ishara tofauti tofauti kimaumbo , ukubwa, na rangi. {Show}.Tafadhali angalia maumbo haya.

1. Can you touch the circle?

Je, unaweza kuguza duara(circle)?

1 = Correct | 0 = Incorrect | 666 = Refused

2. Can you touch the square?

Je, unaweza kuguza mraba(square) ?

1 = Correct | 0 = Incorrect | 666 = Refused

3. Can you touch the triangle?

Je, unaweza kuguza pembetatu (triangle) ?

1 = Correct | 0 = Incorrect | 666 = Refused

4. Now I am going to ask you to do a task. Look at these shapes with different colors. Can you touch the circle?

Sasa nitakuomba ufanye kazi fulani. Angalia maumbo haya yenye rangi tofauti. Unaweza kuguza duara(circle)?

1 = Correct | 0 = Incorrect | 666 = Refused

5. Touch the yellow square

5. Guza mraba (square) wa manjano (yellow)

1 = Correct | 0 = Incorrect | 666 = Refused

6. Touch the large triangle

6. Guza pembetatu (triangle) kubwa.

1 = Correct | 0 = Incorrect | 666 = Refused

7. Touch the black circle then the black triangle

7. Guza circle ya black halafu pembetatu (triangle) ya black

1 = Correct | 0 = Incorrect | 666 = Refused

8. Before touching the blue square, touch the yellow square

8. Kabla ya kugusa mraba (square) wa blue, guza mraba (square) wa manjano (yellow)

1 = Correct | 0 = Incorrect | 666 = Refused

9. After tapping the yellow triangle, tap the blue circle.

9. Baada ya kugonga triangle ya yellow, gonga circle ya blue.

1 = Correct | 0 = Incorrect | 666 = Refused

10. Instead of tapping the yellow square, tap the black circle.

10. Badala ya kugonga square wa manjano (yellow), gonga circle ya black.

1 = Correct | 0 = Incorrect | 666 = Refused

[DO NOT READ] How would you rate the environment in which the cognitive module has been done?

1=Verry quiet and no interruptions at all

2=Very minimal interruptions

3=Moderate interruptions

4=Slightly higher interruptions

5=Very higher interruptions

Survey Break - 3 minutes

Read: We will now take a short, 3 minute break before resuming the survey.

Sasa tutachukua mapumziko ya dakika tatu kabla ya kuendelea na salio ya maswali.

MAKE SURE TO CHECK THE TIME AND ENSURE THAT THE BREAK IS 3 MINUTES.

SECTION 3: CONTACT INFORMATION

Section 7: Occupation and Earnings

A. Farming/ Agriculture

Read: We would now like to discuss the agricultural or pastoral activities that you and other members of your household perform.

Sasa tungependa kuzungumzia shughuli za kilimo au ufugaji ambazo wewe na wananyumba yako wengine mnafanya.

1. Do you or members of your household perform any agricultural or pastoralist activities for yourselves in the last 12 months? *Note: Fish ponds count. However, lake and river fishing are either a business or a job.*

Je, wewe au watu wa nyumba yenu/yako mnafanya shughuli zozote za kilimo au ufugaji kwa miezi 12 zilizopita? Kumbuka: mabwawa ya samaki yanahesabiwa. Hata hivyo, uvuvi wa ziwa na mto ni biashara au kazi

If No Skip to Q6, Otherwise, continue

2. Now think about the different type(s) of tasks you engaged in during the last 7 days for this activity, for example planting, weeding, and/or harvesting. Some days you may have worked more hours, and other days you may have worked fewer hours. How many hours did you work in total on agricultural and pastoralist activities in the last 7 days?

Sasa fikiria kuhusu aina tofauti za kazi ulizofanya katika siku 7 zilizopita kwa shughuli hii, kwa mfano kupanda, kupalilia na/au kuvuna. Siku zingine unaweza kuwa umefanya kazi kwa masaa mengi nyingi zaidi, na siku zingine unaweza kuwa umefanya kazi kwa masaa machache. Je, ulifanya kazi kwa masaa ngapi kwa jumla katika shughuli za kilimo na ufugaji katika siku 7 zilizopita?

3. In total, how many members of the household – not including you - worked on agricultural and pastoralist activities over the last 7 days?

Kwa jumla, ni watu wangapi wa nyumba yako -kando na wewe- walifanya kazi za kilimo na ufugaji katika siku 7 zilizopita?

4. Think about the different type(s) of activities your household members engaged in during the last 7 days, for example planting, weeding, and/or harvesting. Some days they may have worked more hours, and other days they may have worked fewer hours. How many hours did members of your household – not including you – work in agricultural and pastoralist activities in the last 7 days? Hours:

Fikiria kuhusu aina mbalimbali za shughuli ambazo watu wa nyumba yako walifanya katika siku 7 zilizopita, kwa mfano kupanda, kupalilia, na/au kuvuna. Siku fulani wanaweza kuwa wamefanya kazi kwa masaa mengi zaidi, na siku nyingine wanaweza kuwa wamefanya kazi kwa masaa machache zaidi. Je, ni masaa ngapi watu wa nyumba yako kando na wewe walifanya kazi katika shughuli za kilimo na ufugaji katika siku 7 zilizopita? Hours:

5. How much net profit did you generate in total from this activity during the last 12 months?

Ulipata faida kiasi gani kwa jumla kutokana na shughuli hii katika miezi 12 iliyopita? Amount KSH

Here, we mean the value of everything you produced, whether or not you sold it, but then subtracting out expenses for this activity, including hired workers, land rental, storage, and purchase of inputs, such as raw materials, fuel, and electricity, but before purchasing personal items for yourself or your household.

Hapa, tunamaanisha thamani ya kila kitu ulichozalisha, iwe uliuza au hujauza, lakini ukisha toa gharama za shughuli hii, ikiwa ni pamoja na wafanyakazi wa kuajiriwa, kukodisha ardhi, kuhifadhi na ununuzi wa pembejeo, kama vile malighafi, mafuta na umeme. , lakini kabla ya kununua vitu vya kibinafsi kwa ajili yako au nyumba yenu/yako.

B. Self Employment

6. In the last 30 days, have you been self-employed or running a business to earn a living, not including any agricultural business that we have already discussed? 1= Yes, 2= No

Je, katika siku 30 zilizopita umejiajiri au kufanya biashara ili kujikimu kimaisha, bila kujumuisha biashara yoyote ya kilimo ambayo tumeshazungumzia ? 1= Yes, 2= No

If answered YES to Q6, continue. Else skip to Q12

7. Think about your business(es), the cycle of their activities, and the time you actually took working in your business in the last 7 days. How many hours did you work in total in self-employment businesses in the last 7 days?

Fikiria kuhusu biashara yako, mzunguko wa shughuli hizo na wakati ambao ulichukua kufanya kazi katika biashara yako katika siku 7 zilizopita. Je, ulifanya kazi kwa masaa ngapi katika biashara za kujiajiri katika siku 7 zilizopita?

8. What was your total profit from this business in the last 30 days?

Kwa jumla faida yako kutoka kwa biashara hii ilikuwa kiasi gani katika siku 30 zilizopita?

Here we mean the amount you received after paying for expenses for this business, including hired workers, money for household members who helped, rental of space, purchase of goods for sale or for inputs, such as raw materials, fuel, and electricity, but before purchasing personal items for yourself or your household. Ask in terms of "commission" if the FR runs an M-Pesa shop. If unsure, FR can estimate

Amount KSH | _____ |

Hapa, tunamaanisha pesa ulizopata baada ya kulipia gharama za hii biashara, ikiwa ni pamoja na wafanyakazi wa kuajiriwa, pesa kwa watu wa nyumba yako waliokusaidia kwa hii biashara, ununuzi wa bidhaa za kuuzwa au pembejeo, kama vile malighafi, mafuta na umeme. , lakini kabla ya kununua vitu vya kibinafsi kwa ajili yako au nyumba yenu/yako. If unsure FR can estimate. Ask in terms of "commission" if FR runs an Mpesa shop.

12. In the last 30 days, did any other member of your HH perform any non-agricultural self-employed activities?

Kwa siku 30 zilizopita, kuna watu wengine wowote wa nyumba yako/yenu (kando na wewe) walifanya kazi kwa shughuli za kujiajiri wenyewe (biashara)? (1=Yes, 2= No -> Q15, 999=Don't Know ->Q15)

If no, skip to Q15, Otherwise continue

14. In the last 30 days, what was the total income from self-employed activities run by other members of your HH? (exclude respondent)?

Katika siku 30 zilizopita, mapato ya jumla kutokana na shughuli za kujiajiri zinazoendeshwa na watu wengine wa nyumba yako kando na wewe yalikuwa kiasi gani? (ondoa mhojiwa) Amount KSH |_____|

Here we mean the amount you received after paying for expenses for this business, including hired workers, money for household members who helped, purchase of goods for sale or for inputs, such as raw materials, fuel, and electricity, but before purchasing personal items for yourself or your household. If unsure, FR can estimate. Ask in terms of "commission" if the FR runs an M-Pesa shop.

Hapa, tunamaanisha pesa ulizopata baada ya kulipia gharama za hii biashara, ikiwa ni pamoja na wafanyakazi wa kuajiriwa, pesa kwa watu wa nyumba yako waliokusaidia kwa hii biashara, ununuzi wa bidhaa za kuuzwa au pembejeo, kama vile malighafi, mafuta na umeme. , lakini kabla ya kununua vitu vya kibinafsi kwa ajili yako au nyumba yenu/yako. If unsure FR can estimate. Ask in terms of "commission" if FR runs an Mpesa shop. Amount KSH |_____|

C. Wage Employment

15. Have you been employed, working for pay in the last 30 days? (1=Yes, 2=No)

Je, umeajiriwa kwa sasa, umefanya kazi ya malipo katika siku 30 zilizopita? 1=Yes, 2=No

If NO: 15b. In the last 30 days, have you worked as a volunteer, intern or an attachee, with either no pay or only occasional pay? (1=Yes,2=No)

Je, katika siku 30 zilizopita, umefanya kazi kama mfanyakazi wa kujitolea (volunteer), mfanyikazi wa ndani(intern) au kiambatisho (attachee) , bila malipo au malipo ya hapa na pale? (1=Yes,2=No)

If No to 15a and 15b, Skip to Q21, Otherwise, continue

19. Think about the type of tasks you did in the last 7 days. Some days you may have worked more hours, and some days fewer hours. How many hours did you work at this job in total during the last 7 days? |____|

Fikiria kuhusu aina ya kazi ulizofanya kwa siku saba zilizopita. Siku zingine unaweza kuwa umefanya kazi kwa masaa mengi zaidi, na siku zingine masaa machache. Ulifanya kazi kwa masaa mangapi kwa jumla katika siku 7 zilizopita?

20. What is / was the amount of your total (gross) salary/wage employment compensation for the last 30 days? *Note: This includes both cash salary and the total value of all benefits and payment in kind (e.g. food, NSSF/ health insurance, housing, uniforms/ clothing, training, etc) received in the last 30 days worked at this job. Ask for pre-tax salary, where applicable. (Only count the compensation paid (or expected) for the work performed in the last 30 days. If unsure, FR can estimate. If the FR worked in the business of another household member, please ensure that any wages paid to the respondent are not being double-counted as self-employed profits to other household members.)*

Mshahara/malipo yako ya pesa taslimu kwa jumla(gross) kutokana na kuajiriwa ilikuwa ngapi kwa siku 30 zilizopita? Hii inajumuisha malipo ya pesa taslimu na thamani yote ya marupurupu na malipo yasiyo ya pesa (kwa mfano chakula,NSSF/bima ya afya,makazi, sare/mavazi,mafunzo etc) yaliyopokelewa kwa siku 30 zilizopita kwa kazi hii.*Ask for pre-tax salary, where applicable. (Only count the compensation (or expected) for the work performed in the last 30 days. If unsure, FR can estimate. If the FR worked in the business of another household member, please ensure that any wages paid to the respondent are not being double-counted as self-employed profits to other household members.)* Amount KSH |_____|

21. In the last 30 days, did any other members of your household work for salary/wages? Please do not include self-employment. Also, please do not include employment in household agricultural activities that we've discussed, nor other household work (e.g. house help, chores).

Katika siku 30 zilizopita, kuna watu wengine wa nyumba yako/yenu walifanya kazi ya mshahara/malipo? Tafadhali usijumuishe kujiajiri. Pia, tafadhali usijumuishe ajira katika biashara zako mwenyewe au shughuli za kilimo za nyumba yako/yenu ambazo tumezungumzia au kazi zingine za nyumba yako(kwa mfano mfanyikazi wa nyumba, kazi za nyumbani).

(1=Yes, 2= No -> Section 7.D, 999=Don't Know ->Section 7.D)

If no, skip to Section F, Otherwise continue

22. What was the total (gross) salary/wage employment compensation of other members of your household in the last 30 days? (Excluding the respondent).

This includes both cash salary and the total value of all benefits and payment in kind (e.g. food, NSSF/ health insurance, housing, uniforms/ clothing, training, etc) received in the last 30 days worked at this job.

If this employment is in the business of a household member: **READ:** If you are working for a household member, only include direct job compensation, but not food and housing that you share in as a household. If other household members are employed in businesses run by you or other household members, please ensure that any wages paid are not being double-counted as self-employed profits to you or other household members.

Kwa jumla mshahara/malipo ya ajira ya watu wengine wa nyumba yako kwa siku 30 zilizopita ilkuwa ngapi (Excluding the respondent).

Hii inajumuisha malipo ya pesa taslimu na thamani yote ya marupurupu na malipo yasiyo ya pesa (kwa mfano chakula,NSSF/bima ya afya,makazi, sare/mavazi,mafunzo etc) yaliyopokelewa kwa siku 30 zilizopita kwa kazi hii.Kama watu wengine wa nyumba yako wameajiriwa kwa biashara yako au biashara ya watu wengine wa nyumba yako, tafadhali hakikisha kuwa malipo yoyote unayowalipa haihesabiwi mara mbili kama faida ya kujijiri mwenyewe na watu wengine wa nyumba yako

If this employment is in the business of a household member: **READ:**Kama unamfanyia kazi mtu wa nyumba yako,jumuisha tu malipo ya moja kwa moja, lakini sio chakula na nyumba mnayoshiriki kama watu wa nyumba moja

Ikiwa watu wa nyumba yako wengine wameajiriwa katika biashara zinazoendeshwa na wewe au watu wengine wa nyumba yako, tafadhali hakikisha kwamba mshahara wowote unaolipwa hauhesabiwi mara mbili kama faida ya kujijiri kwako au watu wengine wa nyumba yako

Ask for pre-tax compensation, where applicable. If unsure, FR can estimate. *Amount KSH* | _____ |

D. Main Occupation Selection

If Respondent has not worked in the last 7 days (S7.1=2, S7.6=2, S7.15=2) Proceed to Q36. IF NOT, continue:

36. Even though you have not worked in the last 7 days, have you worked in the last 12 months?

Ingawa hujafanya kazi katika siku 7 zilizopita, je, umefanya kazi katika miezi 12 iliyopita?

1= Yes 2=No -> Go to Section 8, Q18.

37. Thinking of all the occupations you have worked in the last 12 months, which do you consider as your most important occupation?

Ukifikiria kazi zote ulizofanya katika miezi 12 iliyopita, ni kazi gani ambayo unaichukulia kuwa muhimu zaidi?

a. {Occupation} Use Occupation Codes

38. What were your usual main tasks at this job? (For example: typing, keeping account books, filing, selling cards, operating printing press, laying bricks) *Text*

Shughuli zako kuu za kawaida katika kazi hii zilikuwa zipi? (Kwa mfano: kuandika, kuweka vitabu vya akaunti, kuhifadhi, kuuza kadi, kuendesha mashine ya uchapishaji, kupanga matofali)

Section 8: Occupational Complexity and Job Characteristics

A. Work Skills

Part A: Self Reported Literacy and Numeracy

Read: Now I am going to ask about things that you may do as part of your work (or may have done in your last work) in **[READ OCCUPATION]**. Some questions may not apply to you, but I need to ask them all so that we can compare these answers across respondents. The first questions are about different kinds of things you might have to read or write as a regular part of this work, including reading on a computer as well as on paper.

Sasa nitauliza kuhusu mambo ambayo unaweza kufanya kama sehemu ya kazi yako (au unaweza kuwa umefanya katika kazi yako ya mwisho) katika **[READ OCCUPATION]**. Baadhi ya maswali huenda yasikuhusu, lakini nitahitaji kuyauliza yote ili tuweze kulinganisha majibu haya kwa waliojibu. Maswali ya kwanza ni kuhusu aina tofauti za vitu ambavyo unaweza kulazimika kusoma au kuandika kama sehemu ya kawaida ya kazi hii, ikiwa ni pamoja na kusoma kwenye kompyuta na pia kwenye karatasi.

1	<p>Do you (did you) read anything at this work, including very short notes or instructions that are only a few sentences long?</p> <p>Je, wewe unasoma (ulisoma) chochote katika [READ OCCUPATION], ikijumuisha maelezo mafupi sana au maelekezo ambayo ni sentensi chache tu kwa urefu?</p>	<p><u>Select One</u> 1= Yes 2= No >> Q4</p>
3	<p>Among the things that you normally read at this work, what is the size of the longest documents that you read?</p> <p>Miongoni mwa vitu ambavyo kwa kawaida unavisoma katika kazi hii, [READ OCCUPATION] ni ukubwa gani wa nyaraka (document) ndefu zaidi unayosoma?</p>	<p><u>Select One</u> 1= One page or less 2= 2 to 5 pages 3= 6 to 10 pages 4= 11 to 25 pages 5= More than 25 pages 999= Don't know</p>
4	<p>What about the documents that you normally read outside of this work? Over the last 12 months, what is the longest document that you have read?</p> <p>Katika kipindi cha miezi 12 iliyopita, nje ya kazi hii, ni nyaraka (document) gani ndefu zaidi uliosoma?</p>	<p><u>Select One</u> 1= One page or less 2= 2 to 5 pages 3= 6 to 10 pages 4= 11 to 25 pages 5= More than 25 pages 6= Does not read/write outside of work 999= Don't know</p>

		>> Go to Q8
5	<p>Do you read anything in your life outside of work as [OCCUPATION], including very short notes or instructions that are only a few sentences long?</p> <p>Je, unasoma chochote katika maisha yako nje ya kazi kama [OCCUPATION], ikiwa ni pamoja na maelezo ikijumuisha maelezo mafupi sana au maelekezo ambayo ni sentensi chache kwa tu kwa refu?</p>	<p><u>Select One</u></p> <p>1= Yes</p> <p>2= No >>6</p>
7	<p>Thinking about the things you normally read outside of this work as [OCCUPATION], what is the longest document that you have read over the last 12 months?</p> <p>Ukifikiria juu ya mambo ambayo kwa kawaida unasoma nje ya kazi hii kama [OCCUPATION], ni nyaraka gani ndefu zaidi ambayo umeisoma katika kipindi cha miezi 12 iliyopita</p>	<p><u>Select One</u></p> <p>1= One page or less</p> <p>2= 2 to 5 pages</p> <p>3= 6 to 10 pages</p> <p>4= 11 to 25 pages</p> <p>5= More than 25 pages</p> <p>6= Does not read outside of work</p> <p>999= Don't know</p>
8	<p>As part of this work, do you (did you) fill out bills or forms?</p> <p>Kama sehemu ya kazi hii, je, wewe unafanya (ulifanya) kujaza bili au fomu?</p>	<p><u>Select One</u></p> <p>1= Yes</p> <p>2= No</p>
9	<p>Do you (did you) ever have to write anything (else) at work, including very short notes, lists, or instructions that are only a few sentences long?</p> <p>Je, wewe (ulikuwa) umewahi kuandika chochote (kingine) kazini,</p>	<p><u>Select One</u></p> <p>1= Yes</p> <p>2= No >>9</p>

	ikijumuisha maelezo mafupi sana, orodha, au maelekezo ambayo ni sentensi chache kwa urefu?	
10	<p>Thinking about all the things you normally write (wrote) at work, what is the longest document that you write (wrote)?</p> <p>Ukifikiria mambo yote ambayo kwa kawaida unayoandika (uliyoandika) kazini, ni waraka gani mrefu zaidi unayoandika (uliyoandika)?</p>	<p><u>Select One</u></p> <p>1= One page or less</p> <p>2= 2 to 5 pages</p> <p>3= 6 to 10 pages</p> <p>4= 11 to 25 pages</p> <p>5= More than 25 pages</p> <p>999= Don't know</p>
11	<p>Thinking about all the things you normally write outside of work as [OCCUPATION], what is the longest document that you wrote in the last 12 months?</p> <p>Ukifikiria juu ya vitu vyote unavyoandika kwa kawaida inje ya kazi kama [OCCUPATION], ni nyaraka gani ndefu zaidi uliyoandika Kwa miezi 12 iliyopita?</p>	<p><u>Select One</u></p> <p>1= One page or less</p> <p>2= 2 to 5 pages</p> <p>3= 6 to 10 pages</p> <p>4= 11 to 25 pages</p> <p>5= More than 25 pages</p> <p>6= Does not read/write outside of work</p> <p>999= Don't know</p> <p>>> Go to Q13</p>
12	Over the last 12 months outside of work as [OCCUPATION] have you filled out bills or forms (such as government forms, application forms, etc)?	<p><u>Select One</u></p> <p>1= Yes</p> <p>2= No</p>

	Kwa miezi 12 iliyopita nje ya kazi kama [OCCUPATION] umejaza bili au fomu (kama vile fomu za serikali, fomu za maombi, nk)?	
13	Thinking of your life outside of this work, do you write anything, including very short notes, lists, or instructions that are only a few sentences long? Ukifikiria maisha yako nje ya kazi hii, je, unaandika chochote, ikijumuisha maelezo mafupi sana, orodha, au maelekezo ambayo ni sentensi chache kwa urefu?	<u>Select One</u> 1= Yes 2= No >>13
14	Over the last 12 months, what is the longest document that you have written outside of this work? Katika kipindi cha miezi 12 iliyopita, ni waraka gani mrefu zaidi ambao umeandika nje ya kazi hii?	<u>Select One</u> 1= One page or less 2= 2 to 5 pages 3= 6 to 10 pages 4= 11 to 25 pages 5= More than 25 pages 6= Does not write 999= Don't know

15	<p>As a normal part of this work, do you (did you) do any of the following...?</p> <ol style="list-style-type: none"> Measure or estimate sizes, weights, distances, Etc. Calculate prices or costs Use or calculate fractions, decimals or percentages Perform any other multiplication or division Use more advanced math, such as algebra, geometry, trigonometry, other Maths (Specify)_____ <p>Kama sehemu ya kawaida ya kazi hii, je, wewe unafanya (ulifanya) yoyote kati ya yafuatayo...?</p> <ol style="list-style-type: none"> Pima au kukadiria ukubwa, uzito, umbali, nk. Piga hesabu ya bei au gharama Tumia au kuhesabu sehemu, desimali au asilimia Fanya hesabu ya uzidishaji au kugawanya Tumia hesabu ya hali ya juu zaidi, kama vile aljebra, jiometri, trigonometry, nk.Hesabu nyingine (taja) 	<p><u>Select One</u> 1= Yes 2= No</p>
16	<p>As part of your life outside of work as [OCCUPATION], have you done any of the following in the last 12 months?</p> <ol style="list-style-type: none"> Measure or estimate sizes, weights, distances, Etc. Calculate prices or costs Use or calculate fractions, decimals or percentages Perform any other multiplication or division Use more advanced math, such as algebra, geometry, trigonometry, other Maths (Specify)_____ <p>Kama sehemu ya maisha yako nje ya kazi kama [OCCUPATION], je, umefanya yafuatayo Kwa miezi 12 iliyopita?</p>	<p><u>Select One</u> 1= Yes 2= No</p>

	<p>a.Pima au kadiria ukubwa, uzito, umbali, nk.</p> <p>b.Piga hesabu ya bei au gharama</p> <p>c. Tumia au kuhesabu sehemu, desimali au asilimia</p> <p>d.Fanya hasabu ya uzidishaji au kugawanya</p> <p>e.Tumia hesabu ya hali ya juu zaidi, kama vile aljebra, jiometri, trigonometry, nk.Hesabu nyingine (taja)_____</p>	
17	<p>Has a lack of reading and writing skills in ENGLISH ever kept you from getting a job, a promotion, or a pay rise, or held you back from advancing your business / your own account activity?</p> <p>Je, ukosefu wa ujuzi wa kusoma na kuandika KIINGEREZA umewahi kukuzuia kupata kazi, kupandishwa cheo, au nyongeza ya mshahara, au kukuzuia kuendeleza biashara yako / shughuli zako za akaunti?</p>	<p><u>Select One</u></p> <p>1= Yes</p> <p>2= No</p> <p>999= Don't know</p>
17a	<p>Has a lack of reading and writing skills in SWAHILI ever kept you from getting a job, a promotion, or a pay rise, or held you back from advancing your business / your own account activity?</p> <p>Ukosefu wa ujuzi wa kusoma na kuandika KISWAHILI umewai kukuzuia kupata kazi ,kupandishwa cheo au kuongezwa mshahara au kukuzuia kuendelea kwa biashara yako/shughuli zako za akaunti?</p>	<p><u>Select One</u></p> <p>1= Yes</p> <p>2= No</p> <p>999= Don't know</p>
<p>Do not read: The following is for respondents who have not worked in the last 12 months</p>		
<p>READ: These questions are general questions about daily activities over the last 12 months. Not all the questions will apply to you, but I have to ask them all. When I speak of reading and writing , I mean</p>		

reading and writing that can be on paper or on computers.

Maswali haya ni maswali ya jumla kuhusu shughuli za kila siku katika kipindi cha miezi 12 iliyopita. Sio maswali yote yatakuhusu, lakini lazima niyaulize yote. Ninapozungumzia kusoma na kuandika, ninamaanisha kusoma na kuandika kwenye karatasi au kwenye kompyuta.

18	<p>Do you read anything, including very short notes or instructions that are only a few sentences long? Je, unasoma chochote katika maisha yako ikijumuisha maelezo mafupi sana au maelekezo ambayo ni sentensi chache tu kwa refu?</p>	<p><u>Select One</u> 1= Yes 2= No >> 18</p>
19	<p>Thinking about all the things you have read over the last 12 months, what is the size of the longest document that you have read? Ukifikiria kuhusu mambo yote uliyoyasoma katika kipindi cha miezi 12 iliyopita, ni ukubwa gani wa nyaraka ndefu zaidi uliyoisoma?</p>	<p><u>Select One</u> 1= One page or less 2= 2 to 5 pages 3= 6 to 10 pages 4= 11 to 25 pages 5= More than 25 pages 6= Does not read/write 999= Don't know</p>
20	<p>Over the last 12 months, have you filled out bills or forms (such as government forms, application forms, etc)? Kwa miezi 12 iliyopita, umejaza bili (bills) au fomu (kama vile fomu za serikali, fomu za application, nk)?</p>	<p><u>Select One</u> 1= Yes 2= No</p>
21	<p>Thinking of the last 12 months, have you written anything (else) including very short lists, notes or instructions that are only a few sentences long? Ukifikiria, kwa miezi 12 iliyopita, umeandika chochote (kingine) ikiwa ni pamoja na orodha fupi sana, maelezo au maelekezo ambayo ni sentensi chache tu kwa urefu?</p>	<p><u>Select One</u> 1= Yes 2= No >>Q21</p>

22	<p>Thinking about all the things you normally write, what is the size of the longest document that you wrote in the last 12 months? Ukifikiria juu ya vitu vyote unavyoandika kwa kawaida, ni ukubwa gani wa nyaraka ndefu zaidi ulizoandika Kwa miezi 12 iliyopita?</p>	<p><u>Select One</u> 1= One page or less 2= 2 to 5 pages 3= 6 to 10 pages 4= 11 to 25 pages 5= More than 25 pages 6= Does not read/write 999= Don't know</p>
23	<p>Thinking of your activities over the last 12 months, have you done any of the following?</p> <ol style="list-style-type: none"> Measure or estimate sizes, weights, distances, Etc. Calculate prices or costs Use or calculate fractions, decimals or percentages Perform any other multiplication or division Use more advanced math, such as algebra, geometry, trigonometry, other maths (Specify)_____ <p>Ukifikiri shughuli zako kwa miezi 12 iliyopita, je, umefanya yoyote kati ya yafuatayo?</p> <ol style="list-style-type: none"> Pima au kadiria ukubwa, uzito, umbali, nk. Piga hesabu ya bei au gharama Tumia au kuhesabu sehemu, desimali au asilimia Fanya hesabu ya uzidishaji au kugawanya Tumia hesabu ya hali ya juu zaidi, kama vile aljebra, 	<p><u>Select One</u> 1= Yes 2= No</p>

	jiometri, trigonometry, nk. Hesabu nyingine (taja)	
24	<p>Has a lack of reading and writing skills in ENGLISH ever kept you from getting a job, a promotion, or a pay rise, or held you back from advancing your business/ own account activity?</p> <p>Je, ukosefu wa ujuzi wa kusoma na kuandika kwa KIINGEREZA imewahi kukuzuia kupata kazi, kupandishwa cheo, au nyongeza ya mshahara, au kukuzuia kuendeleza biashara yako / shughuli za akaunti yako mwenyewe?</p>	<p><u>Select One</u> 1= Yes 2= No 3= Never applied for a job 999= Don't know</p>
24a	<p>Has a lack of reading and writing skills in SWAHILI ever kept you from getting a job, a promotion, or a pay rise, or held you back from advancing your business/ own account activity?</p> <p>Je, ukosefu wa ujuzi wa kusoma na kuandika kwa KISWAHILI umewahi kukuzuia kupata kazi, kupandishwa cheo, au nyongeza ya mshahara, au kukuzuia kuendeleza biashara yako / shughuli za akaunti yako mwenyewe?</p>	<p><u>Select One</u> 1= Yes 2= No 3= Never applied for a job 999= Don't know</p>
Part B: Skills at work		
1	<p>Do not read out loud: Did this respondent have work in the last 7 days or last 12 months?</p>	<p><u>Select One</u> 1= Yes >>write occupation 2= No >>27</p>
	<p>Read: This section asks some general questions about your work. Some questions may not apply to everyone, but we have to ask them in order to be able to compare answers across people. For the first question, I'd like you to think about the kinds of physical activity you have to do as a regular part of your work (or in your last work) as [OCCUPATION]</p> <p>Read: Sehemu hii inauliza maswali ya jumla kuhusu kazi yako. Baadhi ya maswali hayahusu kila mtu, lakini lazima tuyaulize ili kuweza kulinganisha majibu katika nchi zote. Kwa swali la kwanza, ningependa ufikirie juu ya aina ya mazoezi ya mwili ambayo ni lazima ufanye kama sehemu ya kawaida ya kazi yako (au katika kazi yako ya mwisho) kama [OCCUPATION]</p>	

2	<p>As part of this work, do you regularly have to lift or pull anything weighing at least 50 pounds [25 kilos]?</p> <p>Kama sehemu ya kazi hii, je, mara kwa mara unalazimika kuinua au kuvuta kitu chochote chenye uzito usiopungua kilo 25?</p>	<p><u>Select One</u> 1= Yes 2= No</p>
3	<p>Using any number from 1 to 10 where 1 is not at all physically demanding (such as sitting at a desk answering a telephone) and 10 is extremely physically demanding (such as carrying heavy loads, construction worker, etc), what number would you use to rate how physically demanding your work is?</p> <p>Kutumia namba yoyote kutoka 1 hadi 10 ambapo 1 inahitaji nguvu kidogo (kama vile kuketi kwenye dawati na kujibu simu) na 10 inahitaji nguvu nyingi (kama vile kubeba mizigo mizito, mfanyakazi wa ujenzi, nk), ungetumia namba gani kupima jinsi kazi yako inavyodai kimwili?</p> <p>[SHOW CARD #2]</p>	<p><u>Integer #1-10</u></p>
	<p>Read: The next questions are about working with people. When answering the questions think of [OCCUPATION].</p> <p>Read: Maswali yafuatayo ni kuhusu kufanya kazi na watu. Wakati wa kujibu maswali fikiria [OCCUPATION].</p>	
4	<p>As part of this work, how frequently do you spend time co-operating or collaborating with co-workers?</p> <p>Kama sehemu ya kazi hii, ni mara ngapi unatumia muda kushirikiana na wafanyakazi wenzako?</p>	<p><u>Select One</u> 1= Never 2= Less than once a month 3= Less than once a week but at least once a month</p>

		4= At least once a week but not every day 5= Every day
5	<p>As part of this work, do you (did you) have any contact with people other than co-workers, for example with customers, clients, students, or the public?</p> <p>Kama sehemu ya kazi hii, je, wewe una(ulikuwa)na mawasiliano yoyote na watu wengine isipokuwa wafanyakazi wenzako, kwa mfano na wateja(client), wanafunzi, au umma?</p>	<p><u>Select One</u> 1= Yes 2= No >>Q7</p>
6	<p>Using any number from 1 to 10, where 1 is little involvement or short routine involvements, and 10 means much of the work involves meeting or interacting for at least 10-15 minutes at a time with a customer, client, student or the public, what number would you use to rate this work?</p> <p>Kutumia nambari yoyote kutoka 1 hadi 10, ambapo 1 ni ushiriki mdogo au ushiriki mfupi wa kawaida, na 10 inamaanisha kazi nyingi zinahusisha kukutana au kutangamana kwa angalau dakika 10-15 kwa wakati na mteja (client), mwanafunzi au umma, ungetumia namba gani kupima kazi hii? [SHOW CARD #3]</p>	<p><u>Integer #1-10</u></p>
7	<p>As part of this work, do you drive a car, truck or three-wheeler? Kama sehemu ya kazi hii, unaendesha gari, lori au magurudumu matatu?</p>	<p><u>Select One</u> 1= Yes 2= No</p>
8	<p>As part of this work, do you (did you) repair/maintain electronic equipment? (cell phones, computers, printers, other electronic equipment...)</p> <p>Kama sehemu ya kazi hii, je, wewe unafanya (ulifanya) kukarabati/kutunza vifaa vya kielektroniki? (simu za mkononi, kompyuta, printa, vifaa vingine vya kielektroniki...)</p>	<p><u>Select One</u> 1= Yes 2= No</p>

9	<p>As part of this work, do you (did you) operate or work with any heavy machines or industrial equipment? For example, machines/equipment in factories, construction sites, warehouses, repair shops or machine shops, industrial kitchens, some farming equipment (tractors, harvesters, milking machine).</p> <p>Kama sehemu ya kazi hii, je, wewe unafanya (ulifanya) kazi na mashine yoyote nzito au vifaa vya viwandani? Kwa mfano, mashine/vifaa katika viwanda, maeneo ya ujenzi, maghala, maduka ya ukarabati au maduka ya mashine, jikoni za viwandani, baadhi ya vifaa vya kilimo (matrekta, mashine ya kuvuna, mashine ya kukamua maziwa).</p>	<p><u>Select One</u> 1= Yes 2= No</p>
10	<p>Some tasks are pretty easy and can be done right away or after getting a little help from others. Other tasks require more thinking to figure out how they should be done. As part of this work as [OCCUPATION], how often do you have to undertake tasks that require at least 30 minutes of thinking (examples: mechanic figuring out a car problem, budgeting for a business, teacher making a lesson plan, restaurant owner creating a new menu / dish for restaurant, dress maker designing a new dress)</p> <p>Kazi zingine ni rahisi sana na zinaweza kufanywa mara moja au baada ya kupata msaada kidogo kutoka kwa wengine. Kazi nyingine zinahitaji kufikiria zaidi ili kujua jinsi zinavyopaswa kufanywa. Kama sehemu ya kazi hii kama [OCCUPATION], ni mara ngapi unapaswa kufanya kazi ambazo zinahitaji angalau dakika 30 za kufikiria (mifano: fundi kujua tatizo la gari, kupanga bajeti kwa ajili ya biashara, mwalimu kufanya mpango wa somo, mmiliki wa mgahawa kuunda menyu mpya / chakula kwa mgahawa/hoteli, mtengenezaji wa mavazi kubuni mavazi mapya)</p>	<p><u>Select One</u> 1= Never 2= Less than once a month 3= Less than once a week but at least once a month 4= At least once a week but not every day 5= Every day</p>
11	<p>What language(s) do you regularly speak for this work? INDICATE the MAIN LANGUAGE SPOKEN AND UP TO TWO OTHERS IF APPLICABLE</p> <p>a) Main</p>	<p><u>Select One</u> 01= Luhya-Samia</p>

	<p>b) Second c) Third</p> <p>Je, ni lugha gani unayozungumza mara kwa mara kwa ajili ya kazi hii? ONYESHA LUGHA KUU INAYOZUNGUMZWA NA HADI NYINGINE MBILI IKIWA INAFAA</p> <p>a) Kuu b) Ya pili c) Ya tatu</p>	<p>02= Luhya-Nyala 03= Luhya-Khayo 04= Luhya-Marachi 05= Luhya-Other (specify) 06= Luo 07= Teso 08= Kikuyu 09= Asian 10= White 11= English 12= Swahili 13= None 777= Other (specify)</p>
12	<p>As part of this work, do you (did you) have to make formal presentations to clients or colleagues to provide information or persuade them of your point of view? Kama sehemu ya kazi hii, je, wewe unapaswa (ulipaswa) kufanya mawasiliano rasmi(formal presentations) kwa wateja au wenzako ili kutoa taarifa au kuwashawishi kwa maoni yako? <i>Note: A FORMAL PRESENTATION is one that the respondent might prepare carefully beforehand and deliver to a group that has come together to hear it. This includes teachers delivering a lesson, a speech given to an audience, or a 10-minute talk about a specific</i></p>	<p><u>Select One</u> 1= Yes 2= No</p>

	<i>concern to others at your place of work.</i>	
13	<p>As a normal part of this work do you direct and check the work of other workers (supervise)?</p> <p>Kama sehemu ya kawaida ya kazi hii unaelekeza na kuangalia kazi za wafanyakazi wengine (supervise)?</p>	<p><u>Select One</u></p> <p>1= Yes</p> <p>2= No</p>
14	<p>Still thinking of your work as [OCCUPATION] how much freedom do you (did you) have to decide how to do your work in your own way, rather than following a fixed procedure or a supervisor's instructions? Use any number from 1 to 10 where 1 is no freedom and 10 is complete freedom.</p> <p>Bado ukifikiria kazi yako kama [OCCUPATION] una(ulikua na) uhuru kiasi gani kuamua jinsi ya kufanya kazi yako kwa njia yako mwenyewe, badala ya kufuata utaratibu uliowekwa au maelekezo ya msimamizi? Tumia namba yoyote kutoka 1 hadi 10 ambapo 1 hakuna uhuru na 10 ni uhuru kamili.</p> <p>[SHOW CARD #4]</p>	<p><u>Integer #1-10</u></p>
15	<p>As part of this work do you (did you) regularly use a mobile phone, telephone, radio Call or other communication device?</p> <p>Kama sehemu ya kazi unafanya (ulifanya) mara kwa mara unatumia Simu ya mkono, Simu - Landlines, Radio call au Kifaa kingine cha mawasiliano?</p>	<p><u>Select One</u></p> <p>1= Yes</p> <p>2= No</p>
16	<p>How often does (did) this work involve carrying out short, repetitive tasks?</p> <p>Ni mara ngapi kazi hii ina/iilihusisha kutekeleza majukumu mafupi, yanayojirudiarudia?</p>	<p><u>Select One</u></p> <p>1= Almost all the time</p> <p>2= More than half the time</p> <p>3= Less than half the time</p> <p>4= Almost never</p>

17	<p>How often does (did) this work involve learning new things? Ni mara ngapi kazi hii ina/ilihusisha kujifunza mambo mapya?</p>	<p><u>Select One</u> 1= Every day 2= At least once a week 3= At least once a month 4= At least every 2-3 months 5= Rarely or never 999= Don't know</p>
18	<p>As a part of your work do you (did you) use a computer? Kama sehemu ya kazi yako je, wewe unatumia (ulitumia) kompyuta?</p>	<p><u>Select One</u> 1= Yes 2= No >> Q23</p>
19	<p>How often do you (did you) use a computer at work? Ni mara ngapi wewe unatumia/ulitumia kompyuta kazini?</p>	<p><u>Select One</u> 1= Every day 2= Three times or more per week 3= Less than three times per week 4= Almost never</p>
20	<p>Does (did) your work as [OCCUPATION] require the use of the following? a) Email b) Searching for information on the internet c) Data entry d) Word processing e) Spreadsheets f) Databases</p> <p>Je, kazi yako kama [OCCUPATION] inahitaji (ilihitaji) matumizi ya yafuatayo?</p> <p>a) Barua pepe (Email)</p>	<p><u>Select One</u> 1= Yes 2= No</p>

	<ul style="list-style-type: none"> b) Kutafuta habari kwenye mtandao c) Kuingiza data (Data entry) d) Usindikaji wa neno (Word processing) e) Lahajedwali (Spreadsheets) f. Hazina-data (Databases) 	
21	<p>Does (did) your work as [OCCUPATION] require the use of other software packages, designing websites or doing programming or managing networks?</p> <p>Je, kazi yako kama [OCCUPATION] inahitaji (ilihitaji) matumizi ya vifurushi vingine vya programu, kubuni tovuti(designing websites) au kufanya programu au kusimamia mitandao?</p>	<p><u>Select One</u></p> <p>1= Yes</p> <p>2= No >> Q23</p>
22	<p>Does (did) your work as [OCCUPATION] require the use of ?</p> <ul style="list-style-type: none"> a) Advanced functions in spreadsheets such as macros and complex equations b) Book-keeping, accounting or financial software c) Presentation, graphics software (such as Powerpoint) d) Designing websites e) CAD software (computer aided design) f) Statistical analysis or other analysis g) Software programming h) Managing computer networks i) Other (specify)____ <p>Je, kazi yako kama [OCCUPATION] inahitaji (ilihitaji) matumizi ya ?</p> <ul style="list-style-type: none"> a.Kazi za hali ya juu katika lahajedwali(spreadsheets) kama vile macros namilinganyo tata b) Utunzaji wa vitabu, uhasibu au programu ya kifedha c) Uwasilishaji, programu ya picha (kama vile Powerpoint) 	<p><u>Select One</u></p> <p>1= Yes</p> <p>2= No</p>

	<p>d) Kubuni tovuti</p> <p>e) Programu ya CAD (muundo unaosaidiwa na kompyuta)</p> <p>f) Uchambuzi wa takwimu au uchambuzi mwingine</p> <p>g) Programu ya software</p> <p>h) Kusimamia mitandao ya kompyuta</p> <p>i.Nyingine (taja)____</p>	
	<p>READ: The next question are about education, work experience and training. Please continue to think only about [OCCUPATION]</p> <p>Swali linalofuata ni kuhusu elimu,uzoefu wa kazi na mafunzo.Tafadhaliendelea kufikiria tu kuhusu [OCCUPATION]</p>	
23	<p>How useful were your studies during your formal education for this work?</p> <p>Masomo yako wakati wa elimu rasmi yalikuwa na manufaa gani kwa kazi hii?</p>	<p><u>Select One</u></p> <p>1= Not useful at all</p> <p>2= Somewhat useful</p> <p>3= Moderately useful</p> <p>4= Very useful</p> <p>5= Respondent had no formal schooling</p>
24	<p>What minimum level of formal education do you think would be required before someone would be able to carry out this work?</p> <p>Ni kiwango gani cha chini cha elimu rasmi unadhani kingehitajika kabla ya mtu kuweza kutekeleza kazi hii?</p>	<p><u>Select One</u></p> <p>[Education categories]</p>
25	<p>How many years of work experience in other related work do you think would be required before someone with [FILL Q24/NECESSARY EDUCATION] would be able to carry out this work?</p> <p>Ni miaka mingapi ya uzoefu wa kazi katika kazi nyingine</p>	<p><u>Select One</u></p> <p>1= None</p> <p>2= Less than a year</p> <p>3= 1-2 years</p> <p>4= 3-5 years</p>

	zinazohusiana unafikiri ingehitajika kabla ya mtu aliye na [FILL Q24/NECESSARY EDUCATION] angeweza kutekeleza kazi hii?	5= 6-10 years 6= More than 10 years 999= Don't know
26	<p>About how long would it take someone to learn to do this work well if they had [FILL Q24/"NECESSARY EDUCATION"] education and [FILL Q25/"NECESSARY EXPERIENCE"] years of related work experience?</p> <p>Ni muda gani ingechukua mtu kujifunza kufanya kazi hii vizuri ikiwa angekuwa na [FILL Q24/"NECESSARY EDUCATION"] [FILL Q25/"NECESSARY EXPERIENCE"] miaka ya uzoefu wa kazi unaohusiana?</p>	<p>Select One</p> <p>1= Less than one week 2= One week to one month 3= Between one and six months 4= 7-12 months 5= More than a year 6= More than 10 years 999= Don't know</p>
27	<p>On a normal day in your life, [outside of work as [OCCUPATION] do you use a telephone, mobile phone, pager, or other communication device?</p> <p>Enumerator Note: If the respondent reported work in question 1 of this module, say 'think of all activities outside this work', and read the part in square brackets in the questions below. If they did not report work in question 1, do not read the part in the square brackets.</p> <p>Katika siku ya kawaida katika maisha yako, [nje ya kazi kama [OCCUPATION] je, unatumia landline, simu ya mkononi, au kifaa kingine cha mawasiliano?.</p>	<p>Select One</p> <p>1= Yes 2= No</p>
28	<p>In your life [outside of work as [OCCUPATION], do you regularly drive a car, truck, or three wheeler?</p> <p>Katika maisha yako [nje ya kazi kama (OCCUPATION), je, mara kwa mara unaendesha gari, lori, au gurudumu tatu?</p>	<p>Select One</p> <p>1= Yes >> Q30 2= No</p>
29	<p>Do you know how to drive a car, truck or three-wheeler?</p> <p>Unajua kuendesha gari, lori au magurudumu matatu?</p>	<p>Select One</p> <p>1= Yes 2= No</p>

30	<p>As a part of your life [outside of work as [OCCUPATION]] have you used a computer in the past 3 months? Kama sehemu ya maisha yako [nje ya kazi kama [OCCUPATION]] umetumia kompyuta katika miezi 3 iliyopita?</p>	<p><u>Select One</u> 1= Yes 2= No >> Q32</p>
31	<p>Thinking of the last three months, how often have you used a computer [outside of work as [OCCUPATION]]? Kufikiria miezi 3 iliyopita, ni mara ngapi umetumia kompyuta [nje ya kazi kama [OCCUPATION]]?</p>	<p><u>Select One</u> 1= Every day 2= Three times or more per week 3= Less than three times a week 4= Rarely or almost never</p>
32	<p>Has a lack of computer skills ever kept you from getting a job, a promotion, or a pay raise, or from advancing your own business/ own account activity? Je, ukosefu wa ujuzi wa kompyuta umewahi kukuzuia kupata kazi, kupandishwa cheo, au nyongeza ya mshahara, au kuendeleza shughuli zako za biashara / akaunti yako mwenyewe?</p>	<p><u>Select One</u> 1= Yes 2= No 999= Don't know</p>
33	<p>If you were in the position that you were looking for work, do you think you have....? a) The means to find out about job vacancies (access to newspapers, internet, etc.) b) Ability to prepare your resume c) Ability to fill out job applications d) Good references e) Ability to perform adequately in an interview f) Adequate education and qualifications g) The necessary work experience h) A way to certify or demonstrate your education or qualifications i) The means to start your own business j) Other (specify)____</p> <p>Kama ulikuwa katika nafasi ambayo ulikuwa unatafuta kazi,</p>	<p><u>Select One</u> 1= Yes 2= No</p>

	<p>unadhani unayo....?</p> <p>a) Njia za kujua kuhusu nafasi za kazi (upatikanaji wa magazeti, mtandao, nk)</p> <p>b) Uwezo wa kuandika C.V yako</p> <p>c) Uwezo wa kujaza maombi ya kazi</p> <p>d) Marejeo mazuri- (Good references)</p> <p>e) Uwezo wa kufanya vizuri katika mahojiano(interview)</p> <p>f) Elimu na sifa za kutosha</p> <p>g) Uzoefu muhimu wa kazi</p> <p>h) Njia ya kuthibitisha au kuonyesha elimu au sifa zako</p> <p>i) Njia za kuanzisha biashara yako mwenyewe</p> <p>j. Others (specify)____</p>	
34	<p>Have you applied for a job in the past 5 years? Umeomba kazi katika miaka 5 iliyopita?</p>	<p><u>Select One</u> 1= Yes 2= No >>Skip to [Next Section]</p>
35	<p>When applying for a job, has any employer ever asked you to certify / prove, or demonstrate your education qualifications, or work experience? Wakati wa kuomba kazi, mwajiri yeyote amewahi kukuuliza kuthibitisha / kuhakikisha, au kuonyesha sifa zako za elimu, au uzoefu wa kazi?</p>	<p><u>Select One</u> 1= Yes 2= No >>Skip to [Next Section] 3= No response from employer>>Skip to [Next Section]</p>
36	<p>fHow did they ask you to demonstrate / prove it? IF MORE THAN</p>	<p><u>Select One</u></p>

<p>ONE JOB APPLICATION, REFER TO THE MOST RECENT</p> <ul style="list-style-type: none"> a) Asked for proof of official degree from educational institute b) Asked for proof of certificate of studies from training institute c) Asked for personal references or references from previous work d) Gave you a test/exam e) Other (specify) _____ <p>Walikuulizaje kuonyesha / kuthibitisha? IF MORE THAN ONE JOB APPLICATION, REFER TO THE MOST RECENT</p> <ul style="list-style-type: none"> a) Uliombwa uthibitisho wa shahada (degree) rasmi kutoka chuo kikuu b) Uliombwa uthibitisho wa cheti cha masomo (certificates/diploma kutoka taasisi ya mafunzo) c) Uliulizwa marejeo binafsi au marejeo kutoka kwa kazi iliyopita d) Alikupa mtihani e) Others (specify) _____ 	<p>1= Yes 2= No</p>
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B. Karasek job content questionnaire

Read: Please say how much you agree or disagree with each of the following statements. Use the following scale.
Show the respondent the show card #5. Demonstrate that they should select their response using the scale.

1. Strongly disagree
2. Disagree

- 3. Agree
- 4. Strongly agree
- 5. Does not apply

Read: Tafadhali sema ni kwa kiasi gani unakubali au kutokubaliana na kila moja ya kauli ifuatayo. Tumia kiwango kifuatacho.

- 1. Sikubaliani kabisa
- 2. Sikubaliani
- 3. Kukubaliana
- 4. Kubaliana kabisa
- 5. Does not apply

1. All things considered I am satisfied with my job Mambo yote yakizingatiwa nimeridhika na kazi yangu	_
2. My job is physically demanding Kazi yangu inahitajika kimwili	_
3. I receive the recognition I deserve for my work Napokea utambulizi ninayostahili kwa kazi yangu	_
4. My salary is adequate. Mshahara wangu unatosha.	_
5. My job promotion prospects are poor. Matarajio yangu ya kupandishwa cheo kazini ni duni.	_
6. My job security is poor	_

Usalama wangu wa kazi(job security) ni duni	
7. I am under constant time pressure due to a heavy workload. Niko na shinikizo la wakati mara kwa mara kutokana na mzigo mzito wa kazi	<input type="checkbox"/>
8. I have very little freedom to decide how I do my work. Nina uhuru mdogo sana wa kuamua jinsi ninavyofanya kazi yangu	<input type="checkbox"/>
9. I have the opportunity to develop new skills in my job Nina fursa ya kuendeleza ujuzi mpya.	<input type="checkbox"/>
10. I receive adequate support in difficult situations in my job Ninapata msaada wa kutosha katika hali ngumu.katika kazi yangu	<input type="checkbox"/>
11. At work, I feel I have control over what happens in most situations. Kazini, nina uwezo wa kudhibiti yale yanayotokea kwa hali nyingi	<input type="checkbox"/>
12. Considering the things I have to do at work, I have to work very fast. Kwa kuzingatia mambo ninayopaswa kufanya kazini, lazima nifanye kazi kwa haraka sana.	<input type="checkbox"/>
13. I often feel bothered or upset in my work. Mara nyingi huwa nahisi kusumbuliwa au kukasirishwa katika kazi yangu.	<input type="checkbox"/>
14. In my work I am free from conflicting demands that others make. Katika kazi yangu niko huru kutokana na madai yanayotofautiana ambayo wengine hufanya	<input type="checkbox"/>
15. The demands of my job interfere with my personal life. Matakwa ya kazi yangu yanaingilia maisha yangu ya kibinafsi	<input type="checkbox"/>

Section 9: Stress and Discrimination

A: Neighborhood disorder/Social cohesion

Read: These questions ask how you feel about your local area, that is everywhere within a 20 minute walk or about a kilometer of your home.

Maswali haya yanauliza jinsi unavyohisi kuhusu eneo lako la karibu, ambalo liko kila mahali ndani ya dakika 20 za kutembea au kama kilomita moja kutoka nyumbani kwako

<p>1. How much do you feel you belong in this area, where: 1 is "I really feel part of this area, and 7 is "I feel that I don't belong in this area" Unahisi kuwa wewe ni wa eneo hili kwa kiasi gani, ambapo: 1 ni "Ninahisi kuwa mojawapo wa eneo hili, na 7 ni "Nahisi kuwa similiki eneo hili" Show the respondent the show card #6.1. Demonstrate that they should select their response using the scale.</p>	
<p>2. How much of a problem is vandalism and graffiti in this area, where 1 is "There is no problem with vandalism and graffiti in this area", and 7 is "Vandalism and graffiti are a big problem in this area" Ni kiasi gani cha tatizo la uharibifu na graffiti katika eneo hili, ambapo 1 ni "Hakuna shida na uharibifu na grafiti katika eneo hili", na 7 ni "uharibifu na graffiti ni tatizo kubwa katika eneo hili" Show the respondent the show card #6.2. Demonstrate that they should select their response using the scale.</p>	
<p>3. How much can people in this area be trusted, where 1 is "Most people in this area can be trusted" and 7 is "Most people in this area can't be trusted"</p>	

<p>Ni kiasi gani watu katika eneo hili wanaweza kuaminiwa, ambapo 1 ni "Watu wengi katika eneo hili wanaweza kuaminika" na 7 ni "Watu wengi katika eneo hili hawawezi kuaminika"</p> <p>Show the respondent the show card #6.3. Demonstrate that they should select their response using the scale.</p>	
<p>4. How safe do people feel walking alone in this area after dark, where 1 is "People feel safe walking alone in this area after dark" and 7 is "People would be afraid to walk alone in this area after dark"</p> <p>Je,watu wanahisi salama kiasi gani kutembea peke yao katika eneo hili baada ya giza, ambapo 1 ni "Watu wanahisi salama kutembea peke yao katika eneo hili baada ya giza" na 7 ni "Watu wangeogopa kutembea peke yao katika eneo hili baada ya giza"</p> <p>Show the respondent the show card #6.4. Demonstrate that they should select their response using the scale.</p>	
<p>5. How friendly are people in this area, where 1 is "Most people in this area are friendly", and 7 is "Most people in this area are unfriendly"</p> <p>Watu katika eneo hili ni wa kirafiki kiasi gani, ambapo 1 ni "Watu wengi katika eneo hili ni wa kirafiki", na 7 ni "Watu wengi katika eneo hili sio wa kirafiki"</p> <p>Show the respondent the show card #6.5. Demonstrate that they should select their response using the scale.</p>	
<p>6. How cleanly is this area, where 1 is "This area is kept very clean and 7 is "This area is always full of rubbish and litter"</p> <p>Eneo hili ni safi kiasi gani, ambapo 1 ni "Eneo hili linahifadhiwa safi sana na 7 ni "Eneo hili daima limejaa takataka "</p> <p>Show the respondent the show card #6.6. Demonstrate that they should select their response using the scale.</p>	

<p>7. How much would people in this area help you if you were in trouble, where 1 is “there are lots of people in this area who would help you”, and 7 is “there is nobody in this area who would help you”</p> <p>Watu katika eneo hili wangekusaidia kiasi gani kama ungekuwa na shida, ambapo 1 ni "kuna watu wengi katika eneo hili ambao wangekusaidia", na 7 ni "hakuna mtu katika eneo hili ambaye angekusaidia"</p> <p>Show the respondent the show card #6.7 Demonstrate that they should select their response using the scale.</p>	<p style="text-align: center;">┌┐</p>
<p>8. How many vacant or deserted houses or storefronts in this area, where 1 is “there are no vacant or deserted houses or storefronts in this area” and 7 is “there are many vacant or deserted houses or storefronts in this area”</p> <p>Ni nyumba au maduka ngapi yaliyo wazi au yasiyo na watu katika eneo hili, ambapo 1 ni "hakuna nyumba au maduka mengi yaliyo wazi au yasiyo na watu katika eneo hili" na 7 ni "kuna nyumba au maduka nyingi yalio wazi au yasiyo na watu katika eneo hili"</p> <p>Show the respondent the show card #6.8 Demonstrate that they should select their response using the scale.</p>	<p style="text-align: center;">┌┐</p>

B: Ongoing Stress

<p>Read: Now I will read the list below and ask you to indicate whether or not any of these are current and ongoing problems that have lasted twelve months or longer. If the problem is happening to you, indicate how upsetting it has been. Use the following scale:</p> <p>Sasa nitasoma orodha hapa chini na kukuomba uonyeshe kama yoyote kati ya haya ni matatizo ya sasa na yanayoendelea ambayo yamedumu</p>	<p><u>Select One</u></p> <p>1= No, didn't happen 2= Yes, but not upsetting 3= Yes, somewhat upsetting 4= Yes, very upsetting</p> <p>1= Hapana, haikutokea 2= Ndiyo, lakini sio kukasirisha 3= Ndiyo, kwa kiasi fulani inakasirisha 4= Ndiyo, inakasirisha sana</p>
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<p>kwa miezi kumi na miwili au zaidi. Kama tatizo linakutokea, onyesha jinsi ambavyo limekuwa likikukasirisha. Tumia kiwango kifuatacho:</p> <p>Show the respondent the show card #7. Demonstrate that they should select their response using the scale.</p>	
<p>1. Ongoing Financial Strain Matatizo ya Kifedha yanayoendelea</p>	<p style="text-align: center;">┌┐</p>
<p>2. Ongoing Housing Problems Matatizo ya makazi yanayoendelea</p>	<p style="text-align: center;">┌┐</p>
<p>3. Ongoing Problems in Close Relationships Matatizo yanayoendelea katika mahusiano ya karibu</p>	<p style="text-align: center;">┌┐</p>
<p>4. Ongoing Problems with Alcohol or Drug Use in Family Member Matatizo yanayoendelea ya Matumizi ya Pombe au Dawa za Kulevya kwa Mwanafamilia yako</p>	<p style="text-align: center;">┌┐</p>
<p>5. Ongoing Difficulties at Work Matatizo yanayoendelea kazini</p>	<p style="text-align: center;">┌┐</p>
<p>6. Ongoing Difficulty Helping at Least One Sick, Limited, or Frail Family Member or Friend on a Regular Basis Ugumu unaoendelea kusaidia angalau mgonjwa mmoja, mdogo, au mwanafamilia dhaifu au rafiki mara kwa mara</p>	<p style="text-align: center;">┌┐</p>

C. Everyday Discrimination

<p>a. In this section, we would like to know how others have been relating to you in your day to day life. I will read out some statements and ask if these things have happened to you.</p> <p><i>Katika sehemu hii, tungependa kujua jinsi wengine wamekuwa wakihusiana nawe katika maisha yako ya kila siku. Nitasoma baadhi ya taarifa na kukuuliza ikiwa mambo haya yamekutokea.</i></p> <p>Show the respondent the show card #8. Demonstrate that they should select their response using the scale.</p> <p>Show the respondent the SHOW CARD#8</p>	<p>(a)</p> <p>SHOW CARD #8</p> <p><u>Select One</u></p> <p>1= Almost everyday 2= At least once a week 3= A few times a month 4= A few times a year 5= Less than once a year 6= Never</p>		
<p>1</p>	<p>You are treated with less courtesy than other people are.</p> <p><i>Unatendewa kwa ukarimu kidogo kuliko watu wengine</i></p>	<p> __ </p>	
<p>2</p>	<p>You are treated with less respect than other people are.</p> <p><i>Unatendewa kwa heshima ndogo kuliko watu wengine</i></p>	<p> __ </p>	
<p>3</p>	<p>You receive poorer service than other people at restaurants or stores.</p> <p><i>Unapata huduma duni kuliko watu wengine</i></p>	<p> __ </p>	

	kwenye mikahawa au maduka		
4	People act as if they think you are not smart. Watu hufanya kama vile wanafikiri wewe si mwerevu.	<input type="checkbox"/>	
5	People act as if they are afraid of you. Watu hujifanya kwamba vile wanakuogopa	<input type="checkbox"/>	
9	You are threatened or harassed. Unatishiwa au kunyanyaswa	<input type="checkbox"/>	
b	[If any of C1 to C9 <=4] If any of these experiences have happened to you, what do you think is the main reason why they happened? Ikiwa mojawapo ya matukio haya yamekutokea, unadhani ni sababu gani kuu yalitokea?		<u>Select One</u> 1= Your ancestry 2= Place of origin 3= Your gender 4= Your race 5= Your age 6= Your religion 7= Your height 8= Your weight 9= Some other aspect of your physical appearance 10= Your sexual orientation 11= Your education or income level 12= Language Ability 13= Social Group or Family Background 14= Political Orientation 15= Other aspect of identity____
11	[If any of C1 to C9 <=4] Are there additional reasons for these experiences		<u>Select One</u> 1= Yes 2= No
12	If (Q11) =1		<u>Select Multiple</u>

	<p>What do you think are other reasons for these experiences?</p> <p>Je kuna sababu za ziada za uzoefu huu?</p>	<p>1= Your ancestry 2= Place of origin 3= Your gender 4= Your race 5= Your age 6= Your religion 7= Your height 8= Your weight 9= Some other aspect of your physical appearance 10= Your sexual orientation 11= Your education or income level 12= Language Ability 13= Social Group or Family Background 14= Political Orientation 15= Other aspect of identity</p>
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F. Perceived Ethnic Discrimination Questionnaire- Community Version

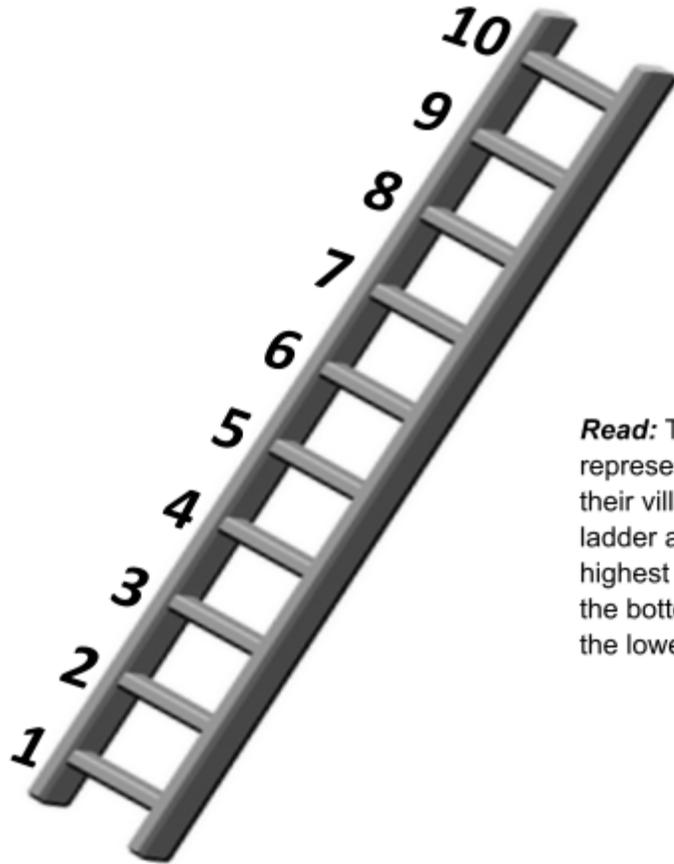
	<p>(a) How often have any of the things listed below ever happened to you, because of your ethnicity SHOW CARD #9</p>	<p><u>Select One</u> 1= Never happened 2= Happened Sometimes 3= Happened very often</p>
3	<p>Have others threatened to hurt you (ex: said they would hit you because of your ethnicity)? Wengine wametishia kukuumiza (mfano: walisema watakupiga) kwa sababu ya kabila lako?</p>	<p> __ </p>

5	<p>Have policeman or security officers been unfair to you because of your ethnicity? Je, polisi au maafisa wa usalama hawakukutendea haki kwa sababu ya kabila lako?</p>	__
8	<p>Have others made you feel like an outsider who doesn't fit in because of your dress, speech, or other characteristics related to your ethnicity? Wengine wamekufanya ujisikie kama mtu wa nje ambaye hafai kwa sababu ya mavazi, hotuba, au sifa nyingine zinazohusiana na kabila lako?</p>	__
9	<p>Have you been treated unfairly by co-workers or classmates because of your ethnicity? Umetendewa isivyo haki na wafanyikazi wenzako au wanafunzi wenzako kwa sababu ya kabila lako?</p>	__
10	<p>Have others hinted that you are dishonest or can't be trusted because of your ethnicity? Je, wengine wamedokeza kuwa wewe si mwaminifu au huwezi kuaminika kwa sababu ya kabila lako?</p>	__

Section 10: Social contacts and social capital

A. MacArthur Ladder

For the rest of the questions in this section, read the questions EXACTLY AS WRITTEN. You may repeat any question as many times as you'd like, but do NOT rephrase any question or add additional comments or explanations.



Read: Think of a ladder as representing where people stand in their villages. At the top of the ladder are the people who have the highest standing in their village. At the bottom are the people who have the lowest standing in their village.

Read: Jaribu kufikiri kuhusu ngazi inayowakilisha watu na nafasi zao katika kijiji. Pale juu ya ngazi ni watu ambao wana nafasi ya juu sana katika kijiji chao na chini kabisa kuna watu ambao wana nafasi ya chini sana katika kijiji chao.

Show the respondent show card #10 with the picture of a ladder. Demonstrate that they should select their response using the diagram.

1. Where would you place yourself on this ladder?
Ni wapi ungejiweka katika hii ngazi?
(1-10, 666=Refuses to respond, 999= DK)
2. What place on the ladder would you like to achieve in your life?
Ni pahali ipi kwa hii ngazi ungependa kufika maishani
(1-10, 666=Refuses to respond, 999= DK)

C. Lubbens Social Network Scale- 6 item

FO Note (DO NOT READ): For this section, we will ask the respondent about their friends and family. We are interested in relatives that the respondents feel close to, close friends, and good friends. There is no right or wrong number of relatives or friends that the respondent should provide. It's important that the FOs are consistent in the way in which they define these relationships, the examples they provide, and the way in which they probe with the respondent

4. Are you currently married?
Je, kwa sasa umeoa/olewa?

Read: Considering the people to whom you are related by birth, marriage, adoption, etc...
Read: *Ukizingatia watu ambao unahusiana nao kwa kuzaliwa, ndoa, kuchukua ulezi, nk...*

1	How many relatives do you see or hear from at least once a month? <i>Ni watu wa ukoo wangapi unaona na kusikia kutoka kwao angalau mara moja kwa mwezi?</i>	<u>Integer</u>
2	How many relatives do you feel at ease with that you can talk about private matters? <i>Ni watu wa ukoo wangapi unajisikia huru nao kwamba unaweza kuzungumza mambo binafsi?</i>	<u>Integer</u>

3	How many relatives do you feel close to such that you could call on them for help? Unajisikia kuwa karibu na watu wa ukoo wangapi kiasi kwamba unaweza kuwaita kwa msaada?	<u>Integer</u>
<p>Read: Considering all of your friends including those who live in your neighborhood...</p> <p>Read: Ukizingatia marafiki zako wote wakiwemo wale wanaoishi mtaani kwako....</p>		
4	How many of your friends do you see or hear from at least once a month? Ni marafiki zako wangapi unaowaona au kusikia kutoka kwao angalau mara moja kwa mwezi?	<u>Integer</u>
5	How many friends do you feel at ease with that you can talk about private matters? Ni marafiki wangapi unajisikia huru nao kwamba unaweza kuzungumzia mambo ya kibinafsi?	<u>Integer</u>
6	How many friends do you feel close to such that you could call on them for help? Ni marafiki wangapi unajisikia kuwa karibu nao kiasi kwamba unaweza kuwaita kwa msaada?	<u>Integer</u>

D. HRS Relationship Quality and Social Support

{If the respondent is married (Section 9.B.4=Yes) then proceed to Section 9.D1. If the respondent is not married, skip Section 9.D.1 and go to Section 9.D.2}

Relationship: Spouse

1. Read: We would now like to ask you some questions about your **PARTNER OR SPOUSE**. For each question use the following scale.

Sasa tungependa kukuuliza maswali kadhaa kuhusu **MPENZI WAKO AU MKE/MUME WAKO**. Kwa kila swali tumia kiwango kifuatacho.

Show the respondent show card #11 Demonstrate that they should select their response using the scale.

1= A Lot
2= Some
3= A Little
4= Not At All

1= Sana

2= Kiasi

3= Sio sana

4= Sivyo hata kidogo

a) How much do they really understand the way you feel about things? Ni kwa kiasi gani wanaelewa jinsi unavyohisi kuhusu mambo?	__
b) How much can you rely on them if you have a serious problem? Unaweza kuwategemea kiasi gani ikiwa una tatizo kubwa?	__
c) How much can you open up to them if you need to talk about your worries? Unaweza kuwafungukia kiasi gani ikiwa unahitaji kuzungumza juu ya wasiwasi wako?	__
d) How much do they criticize you? Wanakukosoa kwa kiasi gani?	__

e) How much do they let you down when you are counting on them? Wanakuangusha kiasi gani wakati unawategemea?	__
f) How much do they get on your nerves? Kwa kiasi gani wanakukasirisha?	__

2.) How close is your relationship with your partner or spouse?

1 = Very close

2= Quite close

3= Not very close

4= Not at all close

2.) Uhusiano wako na mpenzi au mke/mme wako uko karibu kiasi gani?

1 = Karibu sana

2= Karibu kiasi

3= Sio karibu sana

4= Sio karibu kabisa

Relationship: Children

3. How many of your living children are the age of 18 and above?

Je ni watoto wako wangapi walio hai wana umri wa miaka 18 na zaidi?

If the FR has at least one child of the age of 18 and above proceed, otherwise go to Q6.

4.) **Read:** We would now like to ask you some questions about all **YOUR LIVING CHILDREN** aged 18 and above. For each question use the following scale.

Read: Sasa tungependa kukuuliza maswali kadhaa kuhusu **WATOTO WAKO WOTE WALIO HAI**. Kwa kila swali tumia kiwango kifuatacho.

Show the respondent show card #11 . Demonstrate that they should select their response using the scale.

- 1= A Lot
- 2= Some
- 3= A Little
- 4= Not At All

1 = Karibu sana

2= Karibu kiasi

3= Sio karibu sana

4= Sio karibu kabisa

a) How much do they really understand the way you feel about things? Ni kwa kiasi gani wanaelewa jinsi unavyohisi kuhusu mambo?	_
b) How much can you rely on them if you have a serious problem? Unaweza kuwategemea kiasi gani ikiwa una tatizo kubwa?	_
c) How much can you open up to them if you need to talk about your worries? Unaweza kuwafungukia kiasi gani ikiwa unahitaji kuzungumza juu ya wasiwasi wako?	_
d) How much do they criticize you? Wanakukosoa kwa kiasi gani?	_

e) How much do they let you down when you are counting on them? Wanakuangusha kiasi gani wakati unawategemea?	_
f) How much do they get on your nerves? Kwa kiasi gani wanakukasirisha?	_

5.) How many of your children aged above 18 years would you say you have a close relationship with? ____
Ni watoto wako wangapi walio na umri wa miaka 18 na zaidi utasema una uhusiano wa karibu nao? ____

Relationship: Family members

6. Read: We would now like to ask you some questions about your **OTHER IMMEDIATE FAMILY**. These are *individuals related to you (kin) that you share an emotional relationship with, excluding your spouse and children.*
Sasa tungependa kukuuliza maswali kadhaa kuhusu **FAMILIA YAKO NYINGINE YA KARIBU**. Hawa ni watu wanaohusiana na wewe(jamaa) ambao unashiriki nao uhusiano wa kihisia, ukiondoa mwenzi wako na watoto

Show the respondent the scale #11 . Demonstrate that they should select their response using the scale.

- 1= A Lot
- 2= Some
- 3= A Little
- 4= Not At All

1= Sana

2= Kiasi

3= Sio sana

4= Sivyoo hata kidogo

<p>a) How much do they really understand the way you feel about things? Ni kwa kiasi gani wanaelewa jinsi unavyohisi kuhusu mambo?</p>	<p><u>Select One</u> 1= A Lot 2= Some 3= A Little 4= Not At All</p>
<p>b) How much can you rely on them if you have a serious problem? Unaweza kuwategemea kiasi gani ikiwa una tatizo kubwa?</p>	<p><u>Select One</u> 1= A Lot 2= Some 3= A Little 4= Not At All</p>
<p>c) How much can you open up to them if you need to talk about your worries? Unaweza kuwafungukia kiasi gani ikiwa unahitaji kuzungumza juu ya wasiwasi wako?</p>	<p><u>Select One</u> 1= A Lot 2= Some 3= A Little 4= Not At All</p>
<p>d) How much do they criticize you? Wanakukosoa kwa kiasi gani?</p>	<p><u>Select One</u> 1= A Lot 2= Some 3= A Little 4= Not At All</p>
<p>e) How much do they let you down when you are counting on them? Wanakuangusha kiasi gani wakati unawategemea?</p>	<p><u>Select One</u> 1= A Lot 2= Some 3= A Little 4= Not At All</p>
<p>f) How much do they get on your nerves? Kwa kiasi gani wanakukasirisha?</p>	<p><u>Select One</u> 1= A Lot 2= Some 3= A Little 4= Not At All</p>

Close Relationship

7.) How many of these family members would you say you have a close relationship with? (Please write a number in the box.)

Ni wangapi kati ya wanafamilia hawa ungesema una uhusiano wa karibu nao?

Relationship: Friends

8. Read: We would now like to ask you some questions about your **FRIENDS**.

Sasa tungependa kukuuliza maswali kadhaa kuhusu **MARAFIKI** zako. [If FR has friends Section B Q2a>0 OR Section B Q3a>0]

Show the respondent the show card #11 Demonstrate that they should select their response using the show card.

a) How much do they really understand the way you feel about things?

Ni kwa kiasi gani wanaelewa jinsi unavyohisi kuhusu mambo?

Select One

1= A Lot

2= Some

3= A Little

4= Not At All

1= Sana

2= Kiasi

3= Sio sana

4= Sivyoo hata kidogo

b) How much can you rely on them if you have a serious problem?

Unaweza kuwategemea kiasi gani ikiwa una tatizo kubwa?

Select One

1= A Lot

2= Some

3= A Little

4= Not At All

<p>c) How much can you open up to them if you need to talk about your worries? Unaweza kuwafungukia kiasi gani ikiwa unahitaji kuzungumza juu ya wasiwasi wako?</p>	<p><u>Select One</u> 1= A Lot 2= Some 3= A Little 4= Not At All</p>
<p>d) How much do they criticize you? Wanakukosoa kwa kiasi gani?</p>	<p><u>Select One</u> 1= A Lot 2= Some 3= A Little 4= Not At All</p>
<p>e) How much do they let you down when you are counting on them? Wanakuangusha kiasi gani wakati unawategemea?</p>	<p><u>Select One</u> 1= A Lot 2= Some 3= A Little 4= Not At All</p>
<p>f) How much do they get on your nerves? Kwa kiasi gani wanakukasirisha?</p>	<p><u>Select One</u> 1= A Lot 2= Some 3= A Little 4= Not At All</p>

9.) How many of your friends would you say you have a close relationship with? Amount

Ni marafiki zako wangapi utasema una uhusiano wa karibu nao? Amount

E. Loneliness

Read: The next questions are about how you feel about different aspects of your life.

Maswali yanayofuata ni kuhusu jinsi unavyohisi kuhusu mambo mbalimbali ya maisha yako.

Show the respondent show card #12 Demonstrate that they should select their response using the scale.

1. Often
2. Some of the time
3. Hardly ever or never

1. Mara nyingi

2. Baadhi ya wakati

3. Haijawahi kutokea

1. How often do you feel you lack companionship? Ni mara ngapi unahisi unakosa urafiki?	<input type="checkbox"/>
2. How often do you feel left out? Unahisi kutohusishwa mara ngapi?	<input type="checkbox"/>
3. How often do you feel isolated from others? Ni mara ngapi unahisi kutengwa na wengine?	<input type="checkbox"/>
4. How often do you feel in tune with the people around you? Ni mara ngapi unajisikia kuingiana na watu wanaokuzunguka?	<input type="checkbox"/>
5. How often do you feel lonely? Ni mara ngapi unajihisi upweke?	<input type="checkbox"/>

<p>6. How often do you feel that there are people you can talk to? Ni mara ngapi unahisi kwamba kuna watu ambao unaweza kuzungumza nao?</p>	<input type="checkbox"/>
<p>7. How often do you feel that there are people you can turn to? Ni mara ngapi unahisi kwamba kuna watu ambao unaweza kuwategemea?</p>	<input type="checkbox"/>
<p>8. How often do you feel that there are people who really understand you? Ni mara ngapi unahisi kwamba kuna watu ambao wanakuelewa vyema?</p>	<input type="checkbox"/>
<p>9. How often do you feel that there are people you feel close to? Ni mara ngapi unahisi kwamba kuna watu unahisi kuwa karibu nao?</p>	<input type="checkbox"/>
<p>10. How often do you feel part of a group of friends? Ni mara ngapi unahisi kuwa sehemu ya kundi la marafiki?</p>	<input type="checkbox"/>
<p>11. How often do you feel that you have a lot in common with the people around you? Ni mara ngapi unahisi kuwa una mengi yanayofanana na watu wanaokuzunguka?</p>	<input type="checkbox"/>

Section 11: Pollution

A. Indoor Pollution Exposures

1	<p>In your household, what type of cookstove is mainly used for cooking? Katika nyumba yako, ni aina gani ya jiko la kupikia linatumika hasa kwa kupikia?</p>	<p><u>Select One</u> 1= Electric Stove 2= Solar Cooker 3= Liquefied Petroleum Gas (Lpg)/ Cooking Gas Stove 4= Piped Natural Gas Stove 5= Biogas Stove 6= Liquid Fuel Stove 7= Manufactured Solid Fuel Stove 8= Traditional Solid Fuel Stove 9= Three Stone Stove/Open Fire 10= No Food Cooked In Household -> Go to Q6 777= Other(Specify)</p>
1b	<p>Apart from the main cookstove we have talked about, how many other cookstoves has your household used in the last 12 months? Kando na jiko la kupikia kuu(main cookstove) ambalo tumezungumzia, nyumba yako imetumia majiko(cookstove) mangapi katika miezi 12 iliyopita?</p>	<p><u>Integer >> Go to Q1c >0</u></p>
1c	<p>Are they indoor or outdoor? Je ziko ndani au nje?</p>	<p><u>Select One</u> 1= Indoor 2= Outdoor 3= Both Indoor and Outdoor</p>
2	<p>Does the stove have a chimney? Jiko lina chimney?</p>	<p><u>Select One</u> 1= Yes 2= No 999= Don't know</p>

3	<p>What type of fuel or energy source is used in this cookstove? Ni aina gani ya mafuta au chanzo cha kawi kinachotumika katika jiko hili la kupikia?</p>	<p><u>Select One</u> 1= Alcohol/Ethanol 2= Gasoline/Diesel 3= Kerosene/Paraffin 4= Coal/Lignite 5= Charcoal 6= Wood 7= Straw/Shrubs/Grass 8= Agricultural Crop 9= Animal Dung/Waste 10= Processed Biomass (Pellets) Or Woodchips 11= Garbage/Plastic 12= Sawdust 777= Other(specify)</p>
4	<p>Is the cooking usually done in the house, in a separate building, or outdoors? Mara nyingi upishi hufanyika ndani ya nyumba, katika jengo tofauti, au nje?</p>	<p><u>Select One</u> 1= In The House 2= In A Separate Building 3= Outdoors 777= Other(Specify)</p>
4b	<p>How many minutes per day do you spend cooking indoors or in a room when cooking was being done indoors? Ni dakika ngapi kwa siku wewe hutumia kupika ndani ya nyumba au wewe hukaa ndani ya chumba upishi unapoendelea ndani ya nyumba ?</p>	<p>Integer</p>
4c	<p>How many minutes per day do you spend cooking outdoors?</p>	<p>Integer</p>

	Ni dakika ngapi kwa siku wewe(nyinyi) hutumia kupika nje ya nyumba?	
5	Do you have a separate room which is used as a kitchen? Una chumba tofauti ambacho kinatumika kama jikoni?	<u>Select One</u> 1= Yes 2= No
6	What does this household use to heat the home when needed? Nyumba hii inatumia nini kupasha joto inapohitajika?	<u>Select all that apply</u> 1= None 2= Electricity 3= Solar power 4= Generator 5= Car battery 6= Gas 777=Other Specify
7	[If Q6= Electricity or Gas] What type of heater is the (electricity/gas) used in? Ikiwa Q6= Umeme au Gesi] Ni aina gani ya joto (umeme/gesi) inatumika katika kupasha joto?	<u>Select One</u> 1= Central Heating 2= Manufactured Space Heater 3= Traditional Space Heater 4= Manufactured Cookstove 5= Traditional Cookstove 6= Three Stone Stove/Open Fire 7= No Space Heating In Household/No Need 777=Other(Specify)
8	Does it have a chimney? Ina chimney?	<u>Select One</u> 1= Yes 2= No 777= Other(specify)
9	What type of fuel or energy source is used in this heater?	<u>Select One</u> 1= Electricity

	<p>Ni aina gani ya mafuta au chanzo cha kawi kinachotumika kuleta joto hii?</p>	<p>2= Piped Natural Gas 3= Solar Air Heater 4= Liquefied Petroleum Gas (Lpg)/ Cooking Gas 5= Biogas 6= Alcohol/Ethanol 7= Gasoline/Diesel 8= Kerosene/Paraffin 9= Coal/Lignite 10= Charcoal 11= Wood 12= Straw/Shrubs/Grass 13= Agricultural Crop 14= Animal Dung/Waste 15= Processed Biomass (Pellets) Or Woodchips 16= Garbage/Plastic 17= Sawdust 777= Other(Specify)</p>
10	<p>At night, what does your household mainly use to light the home? Wakati wa usiku, nyumba yako inatumia nini hasa kuleta mwangaza</p>	<p><u>Select One</u> 1= Electricity 2= Solar Lantern 3= Rechargeable Flashlight, Torch Or Lantern 4= Battery Powered Flashlight, Torch Or Lantern 5= Biogas Lamp 6= Gasoline Lamp 7= Kerosene Or Paraffin Lamp 8= Charcoal 9= Wood 10= Straw/Shrubs/Grass 11= Agricultural Crop 12= Animal Dung/Waste</p>

		13= Oil Lamp 14= Candle 15= No Lighting In Household 777 = Other(Specify)
11	Are you troubled by air pollution from traffic in your local area? Unasumbuliwa na uchafuzi wa hewa kutoka kwa trafiki katika eneo lako?	<u>Select One</u> 1= Very troubled 2= Somewhat troubled 3= Not troubled

B. Physical Exercise

Read: We are interested in finding out about the kinds of physical activities that people do as part of their everyday lives. The questions will ask you about the time you spent being physically active in the **last 7 days**. Please answer each question even if you do not consider yourself to be an active person. Please think about the activities you do at work, as part of your house and yard work, to get from place to place, and in your spare time for recreation, exercise or sport.

Think about all the **vigorous** and **moderate** activities that you did in the **last 7 days**. **Vigorous** physical activities refer to activities that take hard physical effort and make you breathe much harder than normal. **Moderate** activities refer to activities that take moderate physical effort and make you breathe somewhat harder than normal.

Tungependa kujua aina za shughuli za kimwili ambazo watu hufanya kama sehemu ya maisha yao ya kila siku. Maswali yatakuuliza kuhusu muda uliotumia kuwa mchangamfu kimwili kwa siku 7 zilizopita. Tafadhali jibu kila swali hata kama hujichukulii kuwa mtu mchangamfu.. Tafadhali fikiria juu ya shughuli unazofanya kazini, kama sehemu ya nyumba yako na kazi ya yadi, kuenda au kutoka mahali hadi mahali, na katika muda wako wa ziada wa burudani, mazoezi au michezo.

Fikiria juu ya shughuli zote za nguvu na za wastani ambazo ulifanya kwa siku 7 zilizopita. Shughuli za kimwili za nguvu inamaanisha shughuli ambazo huchukua juhudi ngumu za kimwili na kufanya upumue kwa nguvu zaidi kuliko kawaida. Shughuli za wastani inamaanisha mahusiano ya shughuli ambayo huchukua juhudi za wastani za kimwili na kukufanya upumue kwa kiasi kuwa mgumu kuliko kawaida.

Job-Related Physical Activity

Read: The first section is about your work. This includes paid jobs, farming, volunteer work, course work, and any other unpaid work that you did outside your home. Do not include unpaid work you might do around your home, like housework, yard work, general maintenance, and caring for your family.

{If S7A2>0 OR S7B7>0 OR S7C19>0, proceed. If not Go to Q12.}

The next questions are about all the physical activity you did in the **last 7 days** as part of your paid or unpaid work. This does not include traveling to and from work.

Maswali yanayofuata ni kuhusu mazoezi yote ya mwili uliyofanya kwa siku 7 zilizopita kama sehemu ya kazi yako ya kulipwa au isiyolipwa. Hii haijumuishi kusafiri kwenda na kutoka kazini

1. During the **last 7 days**, on how many days did you do **vigorous** physical activities like heavy lifting, digging, heavy construction, or climbing up stairs **as part of your work**? Think about only those physical activities that you did for at least 10 minutes at a time.

Kwa siku 7 **zilizopita**, kwa siku ngapi ulifanya shughuli kali za kimwili kama kuinua vitu vizito, kulima, ujenzi mzito, au kupanda ngazi(stairs) **kama sehemu ya kazi yako**? Fikiria juu ya shughuli hizo za kimwili tu ambazo ulifanya kwa angalau dakika 10 kwa wakati mmoja. [# of days per week] -> If 0 skip to question 5

2. How much time did you usually spend on one of those days doing **vigorous** physical activities **OUTDOORS** as part of your work?

Kwa kawaida ulitumia muda gani kwa mojawapo ya siku hizo kufanya shughuli kali za kimwili nje (outdoors) kama sehemu ya kazi yako?

- a. Hours per day
- b. Minutes per day

3. How much time did you usually spend on one of those days doing **vigorous** physical activities **INDOORS** as part of your work?

Kwa kawaida ulitumia muda gani katika moja ya siku hizo kufanya shughuli kali za kimwili ndani (indoors) kama sehemu ya kazi yako?

- a. Hours per day
- b. Minutes per day

4. Again, think about only those physical activities that you did for at least 10 minutes at a time. During the **last 7 days**, on how many days did you do **moderate** physical activities like carrying light loads **as part of your work**? Please do not include walking.

Tena, fikiria juu ya shughuli hizo za kimwili tu ambazo ulifanya kwa angalau dakika 10 kwa wakati mmoja. Kwa siku 7 zilizopita, ni kwa siku ngapi ulifanya shughuli za kimwili za wastani kama kubeba mizigo nyepesi kama sehemu ya kazi yako? Tafadhali usijumuisha kutembea.

- a. Days per week -> If 0 skip to question 8

5. How much time did you usually spend on one of those days doing **moderate** physical activities **OUTDOORS** as part of your work?

Kwa kawaida ulitumia muda gani katika moja ya siku hizo kufanya shughuli za kimwili za wastani kama sehemu ya kazi yako nje (outdoors)?

- a. Hours per day []
b. Minutes per day []

6. How much time did you usually spend on one of those days doing **moderate** physical activities **INDOORS** as part of your work?

Kwa kawaida ulitumia muda gani katika moja ya siku hizo kufanya shughuli za kimwili za wastani ndani (indoors) kama sehemu ya kazi yako

- a. Hours per day []
b. Minutes per day []

7. During the **last 7 days**, on how many days did you **walk** for at least 10 minutes at a time **as part of your work**? Please do not count any walking you did to travel to or from work.

1. Katika siku 7 zilizopita, ni kwa siku ngapi ulitembea kwa angalau dakika 10 kwa wakati mmoja kama sehemu ya kazi yako.?

Tafadhali usihesabu kutembea yoyote uliyofanya kwenda au kutoka kazini. .

- a. Days per week [] -> if 0 skip to Part 21.2: Transportation

8. How much time did you usually spend on one of those days **walking** as part of your work **OUTDOORS**?

Kwa kawaida ulitumia muda gani katika moja ya siku hizo **kutembea** nje (outdoors) kama sehemu ya kazi yako?

- a. Hours per day []
b. Minutes per day []

Use Transportation Physical Activity

Read: These questions are about how you traveled from place to place, including for work, or to and from places like your work, stores, movies, and so on.

Read: Maswali haya yanahusu jinsi ulivyosafiri kutoka sehemu moja hadi nyingine, ikijumuisha maeneo ya kazi, maduka, filamu na kadhalika

12. During the last 7 days, what were the main forms of motor vehicle transportation you have used to travel from place to place, including for work, or to and from places like your work, stores, movies, and so on. **[SELECT ALL THAT APPLY]**

Katika siku 7 zilizopita, ni aina gani kuu za usafiri wa magari ambazo umetumia kusafiri kutoka sehemu moja hadi nyingine, ikijumuisha kazini, au kwenda na kutoka mahali kama vile maduka yako ya kazini, filamu na kadhalika

- a. Matatu
- b. Motorcycle
- c. Car
- d. Truck
- e. Tuk-Tuk
- f. Boat or Ferry
- g. Other

	12a During the last 7 days, on how many days did you travel in a : Katika siku 7 zilizopita, ulisafiri kwa siku ngapi kwa.....	12b. How much time did you usually spend on one of those days traveling ? Je kwa kawaida ulitumia muda gani katika mojawapo ya siku hizo kusafiri ukitumia.... Hours per day _ Minutes per day _
a. Matatu		
b. Motorcycle		
c. Car		
d. Truck		
e. Tuk-Tuk		
f. Boat or Ferry		
g. Other		

Now think only about the **bicycling** and **walking** you might have done to travel to and from work, to do errands, or to go from place to place.

Sasa fikiria tu juu ya kuendesha **baiskeli** na **kutembea**, unaweza kuwa umefanya kusafiri kwenda na kutoka kazini, kufanya shughuli, au kwenda au kutoka sehemu moja hadi nyingine

13. During the **last 7 days**, on how many days did you **bicycle** for at least 10 minutes at a time to go **from place to place**?

Kwa siku 7 **zilizopita**, kwa siku ngapi uliendesha **baiskeli** kwa angalau dakika 10 kwa wakati mmoja kwenda au **kutoka** sehemu moja hadi nyingine?

a. Days per week [] -> if 0 skip to question 15

14. How much time did you usually spend on one of those days to **bicycle** from place to place?

Kwa kawaida ulitumia muda gani katika moja ya siku hizo **kuendesha baiskeli** kutoka mahali hadi mahali?

b. Hours per day []

c. Minutes per day []

15. During the **last 7 days**, on how many days did you **walk** for at least 10 minutes at a time to go **from place to place**?

Kwa siku 7 **zilizopita**, ni kwa siku ngapi **ulitembea** kwa angalau dakika 10 kwa wakati mmoja kuenda au **kutoka** sehemu moja hadi nyingine? Siku kwa wiki [] -> ikiwa 0 ruka hadi Sehemu ya 21.3: Kazi za nyumbani, Matengenezo ya Nyumba, na Kutunza Familia

d. Days per week [] -> if 0 skip to 16.

16. How much time did you usually spend on one of those days **walking** from place to place?

Kwa kawaida, ulitumia muda gani katika moja ya siku hizo **kutembea nje (outdoors)** kutoka sehemu moja hadi nyingine?

e. Hours per day []

f. Minutes per day []

Section 12: Conclusion

DO NOT READ: What was the main language used during survey administration

Read: Thank you for your time. Please give me just a moment as I wrap up the survey.

[Asante kwa wakati wako . Tafadhali nipe muda kidogo ninapomalizia utafiti](#)

Please make a note if you believe that the information given to you is suspicious:

Do not read the questions in this box aloud. Simply record your own impressions.

0a. Did the respondent terminate the survey early? (1=Yes, 2=No)

If YES, continue. If NO, skip to question 1.

0b. Why did the respondent terminate the survey early?

1 = Temporary stop only – Wishes to continue survey at a later time. **See “Temporary Stop Instructions” below.**

2 = Tired

3 = Too busy, does not have time

4 = Offended at question

5 = Suspicious of FO / survey intent / IPA

6 = Does not feel like continuing survey

7 = Other (eleza)

Temporary Stop Instructions: You have indicated that the FR wishes to continue the survey in the future. Please ask the FR when they are next available, and then call your team lead (or other senior team member) to confirm this day and time. If you are unable to confirm this day and time, make a tentative appointment with the FR. Then, let the FR know that you will contact them to confirm when you will return. Record this information and the current time on the tracking sheet now.

1. Time end interview: (24 hr clock) |__|__| : |__|__|

2. How was the respondent’s skill in speaking and understanding Kiswahili?

1 = Displayed no problems speaking or understanding Kiswahili

2 = Displayed a little difficulty speaking or understanding Kiswahili

3 = Displayed moderate difficulty speaking or understanding Kiswahili

4 = Displayed serious problems speaking or understanding Kiswahili

3. Who among the following answered questions in this module? (Indicate all that apply **1=Yes, 2=No**)

- A). Focus respondent
- B). Focus respondent's parents
- C). Focus respondent's sibling(s)
- D). Focus respondent's spouse(s)
- E). Focus respondent's other relatives
- F). Focus respondent's other household members who are not relatives

4. Did the respondent become tired or impatient during the survey?
(1= Not at all, 2=Somewhat tired/impatient, 3=Very tired/impatient)

5. How reliable do you think the information in this survey is?
(1= Very reliable, 2=Somewhat reliable, 3= Not at all)

5a. If *SOMEWHAT* or *NOT RELIABLE*: Why?

6a. Is this interview being performed at the respondent's current residence, place of work, or school?
(1=Yes, 2=No)

7. Were any household members smoking while the survey was taking place? (1= Yes, 2=No)

8. Were any household members cooking while the survey was taking place? (1= Yes, 2=No)

FO NOTES:

Appendix B: Data management statements

Note on KLPS-5 C+ Module, Data Management/Access and Pre-Analysis Plans

Date: October 10, 2023

We are in the middle of data collection for Wave 2 of the 5th round of the Kenya Life Panel Survey (KLPS-5) C+ Module. The C+ Module is administered to the same sample of respondents as outlined in Hamory et al. 2021. As of October 10, 2023, we have not filed our pre-analysis plan outlining the key research questions, outcomes, and estimating equations related to the C+ module. We now intend to file a pre-analysis plan that pre-specifies analyses on the Long-Term Impacts of Child Deworming on Mid-life Cognition and Exposome Risk Factors for Alzheimer's Disease and Related Dementia in Kenya using data collected in the C+ module.

The pre-analysis plan is under preparation by Edward Miguel, Jinkook Lee, Will Dow, Alden Gross, Jean Ikanga and Michael Walker, with assistance from Matthew Krupoff, Michelle Layvant, Shreya Chandra, Claudia De Goyeneche, Madeline Duhon, Xuqian Ma, Uyanga Byambaa, and Zan Song. The plan will be uploaded to the AEA RCT Registry with this Data Management Plan attached. We anticipate filing several other pre-analysis plans in the future, each centered around other research questions using data from future data collection rounds, and designed for individual papers or sets of papers.

The C+ pre-analysis plan builds on previously-published papers and pre-analysis plans designed to measure the long-run effects of childhood deworming (Hamory et al. 2021, Baird et al. 2019), and the primary specification for the core deworming treatment effects are the same. Throughout the data collection period, data has been compiled, organized, and stored by the field research associate based in Busia, Kenya, Eric Ochieng, with assistance from Berkeley-based research assistant Matthew Krupoff. The data has been prepared and provided to the individuals writing the pre-analysis plan with only summary statistics on survey data collection quality and respondent tracking rates. These statistics are used to maintain high quality data and reduce attrition.

This document is to attest that treatment effects on any outcomes of interest in the C+ module have not, and will not, be estimated until the pre-analysis plan for the C+ module titled "Long-Term Impacts of Child Deworming on Mid-life Cognition and Exposome Risk Factors for Alzheimer's Disease and Related Dementia in Kenya" is filed. Edward Miguel, Michael Walker, Matthew Krupoff, Michelle Layvant, Shreya Chandra, Claudia De Goyeneche, Madeline Duhon, Xuqian Ma, Uyanga Byambaa, and Zan Song will not merge treatment status with the main dataset with outcome variables. The PIs Jinkook Lee, Alden Gross, Will Dow, and Jean Ikanga will not have access to the treatment status of KLPS respondents. Full access to the C+ dataset with treatment effect indicators will only be provided to each research team member once the pre-analysis plan for the C+ is filed on the AEA RCT Registry. Notes of when particular individuals are given access to the data will be filed as addendums to this Data Management/Access Plan until the C+ pre-analysis plan is filed.

References

Baird, Sarah et al. 2019. "Experimental Evidence on Child Health and Long-run Outcomes in Kenya." AEA RCT Registry. July 11. <https://doi.org/10.1257/rct.1191-9.0>

Pre-analysis plan. Registered at the AEA Trial

Registry 11 July, 2019. AEA Trial Registry AEARCTR-0001191:
<https://www.socialscienceregistry.org/trials/1191>



Matthew Krupoff <mkrupoff@berkeley.edu>

PAP Data Management Plan

Edward Andrew MIGUEL <emiguel@berkeley.edu>

Tue, Oct 10, 2023 at 3:34 PM

To: Matthew Krupoff <mkrupoff@berkeley.edu>, Michelle Layvant <mlayvant@berkeley.edu>

Cc: Michael Walker <mwwalker@berkeley.edu>

>>>>>

I, Edward Miguel, hereby attest that I have followed procedures described in the Data Management Plan and have not estimated treatment effects before filing pre-analysis plans.

Sincerely, Edward Miguel

[Quoted text hidden]



Matthew Krupoff <mkrupoff@berkeley.edu>

[TIME SENSITIVE] Pre-Analysis Plan Attestation

Michael Walker <mwwalker@berkeley.edu>
To: Matthew Krupoff <mkrupoff@berkeley.edu>

Tue, Oct 10, 2023 at 9:34 PM

I, Michael Walker, hereby attest that I have followed procedures described in the Data Management Plan and have not estimated treatment effects before filing pre-analysis plans.

On Tue, Oct 10, 2023 at 6:03 PM Matthew Krupoff <mkrupoff@berkeley.edu> wrote:
[Quoted text hidden]

--
Michael Walker
mwwalker@berkeley.edu



Matthew Krupoff <mkrupoff@berkeley.edu>

[TIME SENSITIVE] Pre-Analysis Plan Attestation

Alden Gross <agross14@jhu.edu>

Wed, Oct 11, 2023 at 3:24 AM

To: "Ikanga, Jean N." <jean.n.ikanga@emory.edu>

Cc: Matthew Krupoff <mkrupoff@berkeley.edu>, Jinkook Lee <jinkookl@usc.edu>, William H Dow <wdow@berkeley.edu>, Edward Miguel <emiguel@berkeley.edu>, Michael Walker <mwwalker@berkeley.edu>

Dear Matt,

Surely!

Here you go:

I, Alden Gross, hereby attest that I have followed procedures described in the Data Management Plan and have not estimated treatment effects before filing pre-analysis plans.

Alden Gross

Associate of the Smartphone

[Quoted text hidden]



Matthew Krupoff <mkrupoff@berkeley.edu>

[TIME SENSITIVE] Pre-Analysis Plan Attestation

Ikanga, Jean N. <jean.n.ikanga@emory.edu>

Tue, Oct 10, 2023 at 9:09 PM

To: Matthew Krupoff <mkrupoff@berkeley.edu>, Jinkook Lee <jinkookl@usc.edu>, William H Dow <wdow@berkeley.edu>, Alden Gross <agross14@jhu.edu>, Edward Miguel <emiguel@berkeley.edu>, Michael Walker <mwwalker@berkeley.edu>

Hello Matt,

Here you go:

I, Jean Ikanga, hereby attest that I have followed procedures described in the Data Management Plan and have not estimated treatment effects before filing pre-analysis plans.

Thanks,
Jean N. Ikanga, PhD
Emory University School of Medicine
Department of Rehabilitation Medicine
Division of Neuropsychology

From: Matthew Krupoff <mkrupoff@berkeley.edu>**Sent:** Tuesday, October 10, 2023 9:00 PM**To:** Jinkook Lee <jinkookl@usc.edu>; William H Dow <wdow@berkeley.edu>; Alden Gross <agross14@jhu.edu>; Edward Miguel <emiguel@berkeley.edu>; Ikanga, Jean N. <jean.n.ikanga@emory.edu>; Michael Walker <mwwalker@berkeley.edu>**Subject:** [External] [TIME SENSITIVE] Pre-Analysis Plan Attestation

[Quoted text hidden]



Matthew Krupoff <mkrupoff@berkeley.edu>

[TIME SENSITIVE] Pre-Analysis Plan Attestation

Jinkook Lee <jinkookl@usc.edu>
To: Matthew Krupoff <mkrupoff@berkeley.edu>

Wed, Oct 11, 2023 at 12:56 AM

I, Jinkook Lee, hereby attest that I have followed procedures described in the Data Management Plan and have not estimated treatment effects before filing pre-analysis plans.

[Quoted text hidden]



Matthew Krupoff <mkrupoff@berkeley.edu>

[TIME SENSITIVE] Pre-Analysis Plan Attestation

William H Dow <wdow@berkeley.edu>

Wed, Oct 11, 2023 at 11:05 AM

To: Matthew Krupoff <mkrupoff@berkeley.edu>

Cc: Jinkook Lee <jinkookl@usc.edu>, Alden Gross <agross14@jhu.edu>, Edward Miguel <emiguel@berkeley.edu>, "Ikanga, Jean N." <jean.n.ikanga@emory.edu>, Michael Walker <mwwalker@berkeley.edu>

Hi Matt,



I, William Dow, hereby attest that I have followed procedures described in the Data Management Plan and have not estimated treatment effects before filing pre-analysis plans.

Best,
Will

[Quoted text hidden]



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69K



Matthew Krupoff <mkrupoff@berkeley.edu>

[TIME SENSITIVE] Pre-Analysis Plan Attestation

Eric Ochieng <eochieng@poverty-action.org>
To: Matthew Krupoff <mkrupoff@berkeley.edu>
Cc: Brenda Ochieng <bochieng1@poverty-action.org>

Wed, Oct 11, 2023 at 9:30 AM

Thanks Matt.

Below find my attestation statement.

I, **Eric Ochieng**, hereby attest that I have followed procedures described in the Data Management Plan and have not estimated treatment effects before filing pre-analysis plans.

Best,
Eric
--



Eric Ochieng

Research Manager, IPA-Kenya
Innovations for Poverty Action
Mobile:+254742984643, Skype: eric.ochieng3

MORE EVIDENCE, LESS POVERTY

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[Quoted text hidden]



Matthew Krupoff <mkrupoff@berkeley.edu>

[TIME SENSITIVE] Pre-Analysis Plan Attestation

Brenda Ochieng <bochieng1@poverty-action.org>
To: Matthew Krupoff <mkrupoff@berkeley.edu>
Cc: Eric Ochieng <eochieng@poverty-action.org>

Wed, Oct 11, 2023 at 9:39 AM

Hi Matt,

Please see below my attestation:

I, Brenda Ochieng' hereby attest that I have followed procedures described in the Data Management Plan and have not estimated treatment effects before filing pre-analysis plans.

Kind regards,



Brenda Ochieng'
Research Associate, Kenya

Innovations for Poverty Action

Mobile: +254 721 433 648, **Skype:** (live:fd1df9bc0330bbcb)

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[Quoted text hidden]



Matthew Krupoff <mkrupoff@berkeley.edu>

PAP attestation

Matthew Krupoff <mkrupoff@berkeley.edu>
To: Matthew Krupoff <mkrupoff@berkeley.edu>

Mon, Nov 6, 2023 at 4:06 PM

I, Matthew Krupoff, hereby attest that I have followed procedures described in the Data Management Plan and have not estimated treatment effects before filing pre-analysis plans.



Matthew Krupoff <mkrupoff@berkeley.edu>

[TIME SENSITIVE] Pre-Analysis Plan Attestation

Madeline E Duhon <mduhon@berkeley.edu>
To: Matthew Krupoff <mkrupoff@berkeley.edu>

Tue, Oct 10, 2023 at 9:44 PM

Hi Matt,

Just wanted to email to confirm that: I, Madeline Duhon, hereby attest that I have followed procedures described in the Data Management Plan and have not estimated treatment effects before filing pre-analysis plans.

Best,
Maddie

On Tue, Oct 10, 2023 at 6:03 PM Matthew Krupoff <mkrupoff@berkeley.edu> wrote:

[Quoted text hidden]



Matthew Krupoff <mkrupoff@berkeley.edu>

[TIME SENSITIVE] Pre-Analysis Plan Attestation

Michelle Layvant <mlayvant@berkeley.edu>
To: Matthew Krupoff <mkrupoff@berkeley.edu>

Tue, Oct 10, 2023 at 6:04 PM

I, Michelle Layvant, hereby attest that I have followed procedures described in the Data Management Plan and have not estimated treatment effects before filing pre-analysis plans.

[Quoted text hidden]



Matthew Krupoff <mkrupoff@berkeley.edu>

[TIME SENSITIVE] Pre-Analysis Plan Attestation

Uyanga Byambaa <u.byambaa@berkeley.edu>
To: Matthew Krupoff <mkrupoff@berkeley.edu>

Tue, Oct 10, 2023 at 6:52 PM

I, Uyanga Byambaa, hereby attest that I have followed procedures described in the Data Management Plan and have not estimated treatment effects before filing pre-analysis plans.
Best, Uyanga

On Tue, Oct 10, 2023 at 6:03 PM Matthew Krupoff <mkrupoff@berkeley.edu> wrote:
[Quoted text hidden]



Matthew Krupoff <mkrupoff@berkeley.edu>

[TIME SENSITIVE] Pre-Analysis Plan Attestation

Xuqian Ma <ma000092@berkeley.edu>

Tue, Oct 10, 2023 at 8:23 PM

To: Matthew Krupoff <mkrupoff@berkeley.edu>

I, Xuqian, hereby attest that I have followed procedures described in the Data Management Plan and have not estimated treatment effects before filing pre-analysis plans.

On Tue, Oct 10, 2023 at 6:03 PM Matthew Krupoff <mkrupoff@berkeley.edu> wrote:

[Quoted text hidden]



Matthew Krupoff <mkrupoff@berkeley.edu>

[TIME SENSITIVE] Pre-Analysis Plan Attestation

Zan Song <songzan@berkeley.edu>

Wed, Oct 11, 2023 at 9:52 AM

To: Matthew Krupoff <mkrupoff@berkeley.edu>

I, Zan Song, hereby attest that I have followed procedures described in the Data Management Plan and have not estimated treatment effects before filing pre-analysis plans.

On Tue, Oct 10, 2023 at 6:03 PM Matthew Krupoff <mkrupoff@berkeley.edu> wrote:

[Quoted text hidden]



Matthew Krupoff <mkrupoff@berkeley.edu>

[TIME SENSITIVE] Pre-Analysis Plan Attestation

Shreya Chandra <shreya.chandra@berkeley.edu>
To: Matthew Krupoff <mkrupoff@berkeley.edu>

Wed, Nov 8, 2023 at 11:36 AM

I, Shreya Chandra, hereby attest that I have followed procedures described in the Data Management Plan and have not estimated treatment effects before filing pre-analysis plans.

On Tue, Oct 10, 2023 at 9:03 PM Matthew Krupoff <mkrupoff@berkeley.edu> wrote:

[Quoted text hidden]

[Quoted text hidden]